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THE MAGAZINE FOR A500, A600, A1200 & CD32 OWNERS

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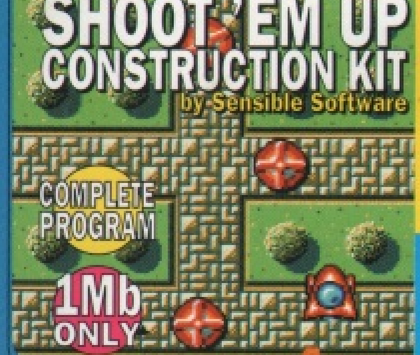
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ASK YOUR NEWSAGENT



LIBERATION ON THE CD32
REVIEW OF THE YEAR
OUR TOP PREDICTIONS FOR 1994
MEDIA POINT - MULTIMEDIA MADE EASY
FINAL WRITER - THE ULTIMATE WORD PUBLISHER?
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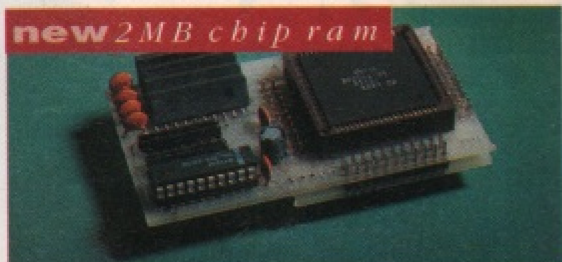
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PC880B*drive*



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A600/A1200 Colour Scanner available soon

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Epson GT6500 ASDG ... £798
Epson GT8000 PowerScan £1199
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OCR Full Version Upgrade ... £49
(OCR full version is only available to registered users of OCR Junior)

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ROM Share ... £19.95
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ROM Share inc. v1.3 ... £39
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supra *modems*



Comes complete with English phone cable, RS 232 serial cable, PSU & comms software.

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pc *1208*

Power Computings latest 32-bit memory expansion for the Amiga 1200 is now available. The PC1208 uses the latest industry standard 32-bit Simm technology which allows you to use 1MB, 2MB, 4MB and 8MB modules. Simply adding either a PC1208 to your Amiga 1200 will increase its processing speed by 219%, comes with real-time battery backed clock and optional FPU available.

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PC1208 + 68882 40MHz ... £489.95
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pc *1204*



The original PC1204 4MB 32-bit memory expansion is still available, and is exceptional value.

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PC1204 with 4MB only ... £185.95
PC1204 + 68881 20MHz ... £219.95
PC1204 + 68882 20MHz ... £235.95
PC1204 + 68882 33MHz ... £259.95
PC1204 + 68882 40MHz ... £279.95
PC1204 + 68882 50MHz ... £319.95

A4000 *peripherals*

33MHz FPU ... £60
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xl *drive*



The 1.76MB Disk Drive* can be used with any Amiga. With the 'XL Drive' you can fit a massive 1.76MB on a high density floppy disk, the drive can also act as a standard 880K drive and can also read & write disks written on an Amiga 4000 internal HD drive.

External XL Drive ... £85
Internal XL Drive ... £75
A4000 Internal XL Drive ... £75
*Requires KickStart 2 or above.

exclusive *products*

pc880 *upgrade*

Power Computing can now upgrade your PC880 drive from a 880K to a 1.76MB high density drive, all you need to do is check that you have the serial number 'Sony MFD17W-22' on your disk drive casing. (You'll need to unscrew the casing. This does not affect the warranty)

PC880 Interface upgrade £49.95

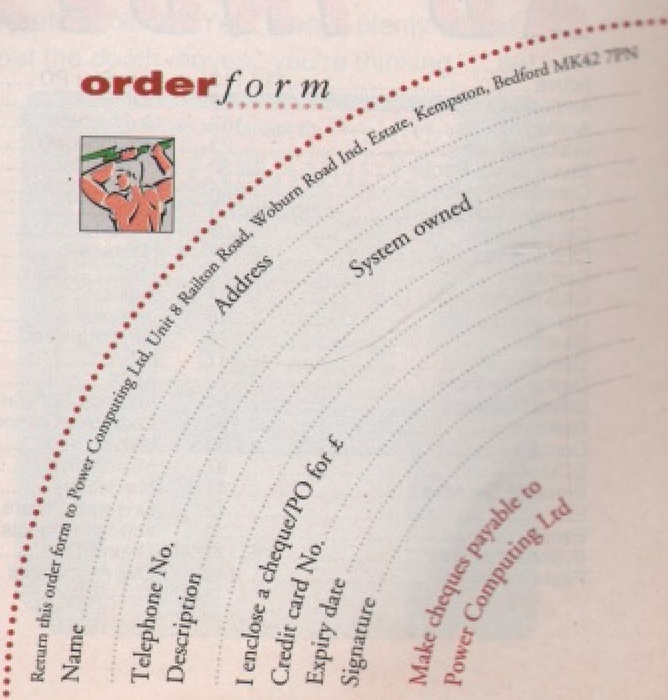
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disk *expander*

This Easy to use and install expander can add 60% to your Hard Drive capacity. It quickly compresses and decompresses data and is very reliable ensuring no data corruption. It works with all drives, SCSI, IDE, floppies, even RAM disk and is expandable as new compression libraries are developed.

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Now the Amiga has come of age in the animation and special effects industry, we throw the spotlight on the very best up-and-coming and established Amiga animators. We also put *Deluxe Paint IV* and *Brilliance* into a head-to-head battle to see just who is the king of Amiga paint programs. All of that, plus inside info from the man who brought us *Defender of the Crown*, Jim Sachs, who knows more about the Amiga than even Commodore.

108 REVIEW OF THE YEAR

It's got to be done, let's face it! The essential look back on the highs and lows of 1993 as seen through the pages of CU AMIGA will have you reaching for the Kleenex as watery-eyed nostalgia takes over. Do you remember what *you* were doing when Commodore announced the CD32? Re-live the arrival of the most astounding software and hardware releases, get all cosy as you remember reading that August issue at the bus stop in glorious sunshine, and maybe even spare a thought for what next year might bring...

AD INDEX

OFF THE CUFF

EDITORIAL


Dan Slingsby – Editor

Are Commodore about to break up the company and sell off their Amiga technology to the highest bidder? Rumours abound at the moment concerning the financial health of the Big C and whether the company is still a viable concern. Yet another set of disappointing financial figures have just been released by Commodore, and these have done nothing to quell the scaremongers amongst us. In an exclusive news story, CU Amiga goes behind the scenes to assess Commodore's chances of surviving through the coming year to launch their high-end workstations that will, undoubtedly, blow away the competition. We talk to David Pleasance, Commodore UK's joint MD, leading software houses and other commentators to find out their views and opinions. Full story on page 10/11.

We've also got a truly gigantic graphics and animation feature which covers everything from how the Amiga is being used in hit movies to how to gain a diploma in Amiga animation. There's also a battle of the paint programs, as Digital Creation's Brilliance takes on EA's DPaint in a head-to-head encounter, and we've also got an exclusive interview with Jim Sachs, one of the premier Amiga artists of all time.

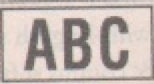
There's lots more besides, but I'll let you discover it all at your leisure. With the bottom of the page rapidly approaching, I want to take time out to say a big thank you to all our loyal readers who have supported us throughout 1993. Our circulation has sky-rocketed during this time, and it's very encouraging to get all your letters of support and encouragement. So, without snivelling uncontrollably into by hanky, I'd like to say a big THANKS, and wish you all a very happy and enjoyable new year. See you in 1994!

NEXT ISSUE ON SALE 19 JANUARY

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111, 408
Jan-June 1993

GET SERIOUS

PRODUCTIVITY REVIEWS PRODUCTIVITY REVIEW

At last, Rombo's long-awaited VIDI 12 and 24 RT is with us, and pretty tasty it is too! Then there's *MediaPoint*, the package that threatens to topple the mighty *Scala*, along with Power's PCMCIA-friendly 1208 board, and stacks more besides. Get stuck in!



VIDI 12 and 24 RT finally see the light of day. Grab a piece of the action on page 116.

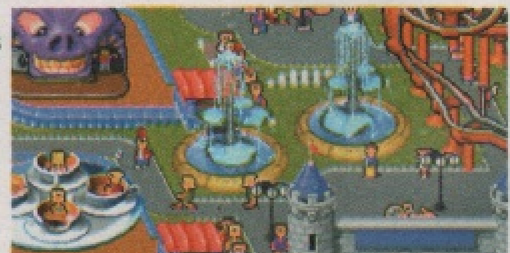


Multimedia made easy with *MediaPoint* – has *Scala* mets its match?

SCREEN SCENE

GAME REVIEWS GAME REVIEWS GAME REVIEWS

Full of festive cheer and good will to all men, we've got a chestnut-roastingly good stocking of games for you this month. Gather round the Christmas pud and feast your mince pies on the joys of such celebrations of life as *Cannon Fodder* and *Alien Breed 2*, then settle down with a chocolate orange and peruse the rest of our selection.



Theme Park: Bullfrog's answer to EuroDisney. Could you do it better than Mickey and Donald?



Throw out your morals, here comes *Cannon Fodder*, the sickest game since the infamous Carrot and Pea simulator.

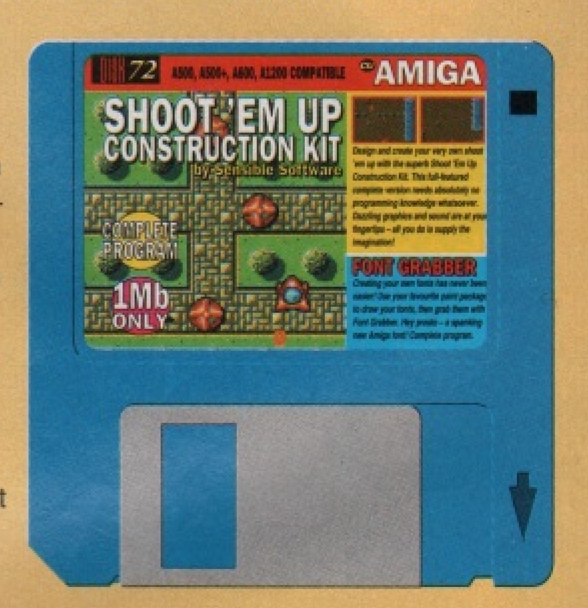
REGULARS

COVERDISKS

Ever wanted to create your own games? Well now's your chance as we're giving away the games creation package, *Shoot 'Em Up Construction Kit*. What's more we've also got a Fonts creation program and an amazing, exclusive *Mortal Kombat* playable demo.

DISK 72 — PAGE 16

Ever wanted to write your own shoot 'em up? Well now you can, with the superb *Shoot 'Em Up Construction Kit*! Even a complete newcomer to computers can get a fast-paced bout of alien-zapping in a matter of minutes. No messing about with programming, no confusing techie bits, just a simple joystick or mouse-controlled set of menus is all you need to get your head around. Why not take it easy to begin with, and enjoy the three complete games that come ready-made on the disk? Design your own devious levels, concoct warped alien species, and then throw in a couple of turbo-charged players armed to the gills with the latest in thermo-nuclear weaponary. The results? One brilliantly addictive shoot 'em up! Get blasting!



DISK 73 — PAGE 22

Yes, it really is *Mortal Kombat*! We've gone and got you lucky lot a totally mortal one- or two-player demo! Are we good to you or what? Had enough of your console-crazy mates bragging about all their beat 'em ups? Well get this in your drive pronto, and see just what your Amiga can do – forget Street Fighter II Turbo Plus Extra With Bells On Edition, *Mortal Kombat* is the only option if you want it hard and fast. You want speed? You got it. You want loads of moves? You got 'em. You want buckets of blood? Yep, there's plenty of that too. 'But what about the death moves,' you're thinking, '...bet they haven't put those in...', well think again! Yes, it's all here in our exclusive playable demo of the biggest game of 1993, blood, guts, gore, speed, and everything that made the coin-op the smash it is. What are you waiting for? Finish him!



Dennis™

TAKE YOUR BEST SHOT!

For over 40 YEARS he's been making us laugh... driving Mr. Wilson crazy! Now you can play the sling-shot hero and join in on all his side splitting pranks. Dennis is his name and mischief is his game! So c'mon...





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CU NEWS

SO WHERE'S YOUR CD32 NEWS, THEN!?

Fear not, we've got so much of it, we've crammed it all into its own special section. So, if you want the latest news on Commodore's new super console, including details of the FMV add-on unit, turn to page 59 now!

LEMONADE SHANDAR

Does the name Shandar the Wizard stir memories of wandering around dark underground catacombs and running across wasteland islands chased by bees and huge lizard warriors? If so, you'll be a little displeased to hear that he didn't actually die at the end of *Ishar 2*, but merely turned into gas, which has now taken over the mind of the 2000 year old dragon Wohratax. Guess who has to step back in to save the day?

If none of this is making any sense, then you obviously aren't awaiting the release of *Ishar 3* as enthusiastically as you should. Silmarils have gone overboard in upgrading and revamping their game system, and it now includes such gems as forty different spells, a time travel scenario and even film sequences to break up the action! *Ishar 3* will be released in April, apparently. Contact Daze on 071 328 2762.



FREE AMITEK HAWK RAM UPGRADE

Silica Systems are offering a free update to the Amitek Hawk RAM board. The original Hawk board disabled access to and from the PCMCIA port (used for RAM cards and the Overdrive hard drive), but a replacement chip is now available to rectify the problem. Call Silica Systems on 081 309 1111 for further details.



TV PAINT 2 PRICE DROP

The 24-bit paint package *TV Paint 2.0* has just been reduced in price to a more affordable £249. *TV Paint 2.0* is compatible with the AVideo, Domino, CBM A2410, various EGS, Harlequin/Harlequin Plus, GVP IV24, Retina, various Sage, VD2001 and Picasso graphics boards. Contact Amiga Centre Scotland on 089 687 538.

BIT.MOVIE 94

If you get your skates on, there's still time to enter the 1994 Bit.Movie computer art contest. The festival will take place in Riccone, Italy, from March 31st to April 4thh,1994. There are three categories for the contest: real time animation, still images and computer-generated video animations. The real time animation category is dedicated to sequences that are run directly from the host computer (real time image rendering is not necessary), such as pre-rendered movies playing from RAM or a hard drive. Entries must be in by January 31st 1994, and must be supplied together with the Bit.Movie application form. The contest is open to users of any computer system, but even pitted against professional workstations and 24-bit mega-machines, the Amiga has thrown up its share of winners, including Eric Schwartz and Craig Collins. Entry forms are available from Bit.Movie '94, c/o Carlo Mainardi, Via Bologna 13, 47036 Riccone, ITALY. Fax: 010 39 541 601962.



FAX OF LIFE

On the way from Village Tronic is a new software fax system for your Amiga. If you've got a FaxClass2 capable modem, you'll be able to turn your computer into a fully-functional fax terminal with *TrapFax*. *TrapFax* has been developed by Maximilian Hantsch and his "Trapdoor Development Team", programmers of the popular FidoNet Front End Mailer. The modular system allows the Amiga to receive incoming faxes, re-route the print option of any application to the fax, and you can even connect several fax files to one multi-page fax. It's fully localised under Workbench 2.1, and also makes use of a few of Workbench 3's new features. Village Tronic can be reached on 010 49 50 701 30 (Germany).



»

IS THIS THE END

Is Commodore and the Amiga living on borrowed time or is this the dawning of a new age? Jason Holborn clarifies the future of the Amiga...

If you've been monitoring the fortunes of both Commodore and the Amiga over the past year or so, you couldn't help but notice the rather bleak picture that is being painted by both the press and software houses over recent months. Commodore, of course, insist that the Amiga is still riding high in the popularity stakes and will continue to do so for some time to come, especially with the recent release of the CD32, but is this just plain marketing hype or a concerted effort to restore confidence in an ailing market?

Recent news stories in both the Amiga and trade press have done nothing to distill the worries that many Amiga users are now feeling. With Commodore feeling the pinch of heavy financial losses and the loss in confidence caused by bungled changes in the Amiga range (the A500 Plus and A600), not to mention the news of widespread redundancies within Commodore's US-based research and development wing, it's not surprising that many would-be Amiga owners have been tempted to move over to lesser systems. Is the Amiga destined for the great computer scrap heap in the sky or is this just a minor hiccough in Commodore's greater scheme of things?

THAT DEJA-VU FEELING...

At the top of most people's list of worries has to be the fortunes of Commodore itself, a company that is certainly no stranger to financial woes. When the Amiga was first launched way back in 1985, Commodore were in the grips of a financial crisis that many believed would be its undoing. As history shows, however, Commodore weathered that crisis and many industry speculators believe that Commodore can do it again with this latest one.

Much has been said about Commodore's latest set of financial figures which continued to show substantial losses. According to the report, Commodore made a loss of $82.6 million for the last quarter ending June 30th 1993 (compared to a profit of $27.6 million for the same period of 1992). For the first quarter of the 1994 financial year ending September 30th 1993, turnover was down on the previous year from $158.6 million to $82.6 million with Commodore making a loss of $9.7 million.

In a recent news story published within the computer trade's journal, *Computer Trade Weekly*, these figures were greeted with considerable pessimism with *CTW* quoting a statement included with the results that painted an even bleaker picture. According to *CTW*, Commodore themselves believe that: 'The company's financial position and operating results raise substantial doubts about the company's ability to continue as a going concern'. Scarey stuff, maybe, but David Pleasance, MD of Commodore UK, was quick to answer CTW's claims and to reassure Amiga owners just how healthy Commodore now are.

'We're not at all chuffed with the CTW article. It leaves out a very important part of the report. The June quarter figures were in line with what we had forecast. We made provisions in our accounts for substantial writedowns of our A600 inventory and indeed Commodore internationally. What we anticipate is that we shall have a very strong effect in September and we can reduce our losses quite substantially.'

'We hope to be in a "break even" position or even profitable by December. Sure, the figures show that we made a loss, but they fail to highlight that it was a very small loss and we have succeeded in reducing our liabilities considerably. The notes that *CTW* published were a result of the June quarter figures – those notes were put on by auditors but the September figures showed a marked improvement.'

'If we don't break even this quarter world wide, we're going to be damned close – in fact, I'd be very surprised if we don't make a profit in the next quarter. We're not a billion dollar corporation anymore, but we're going to make a profit. If our supporters had any doubts, don't you think that they would have pulled the plug a long time ago? At the end of the day, we're indebted to the brand loyalty of our users. They have saved us'.



Would you buy a CD32 fron these men? Of course you would. Left: David Pleasance and Colin Proudfoot, Joint Managing Directors of Commodore UK.

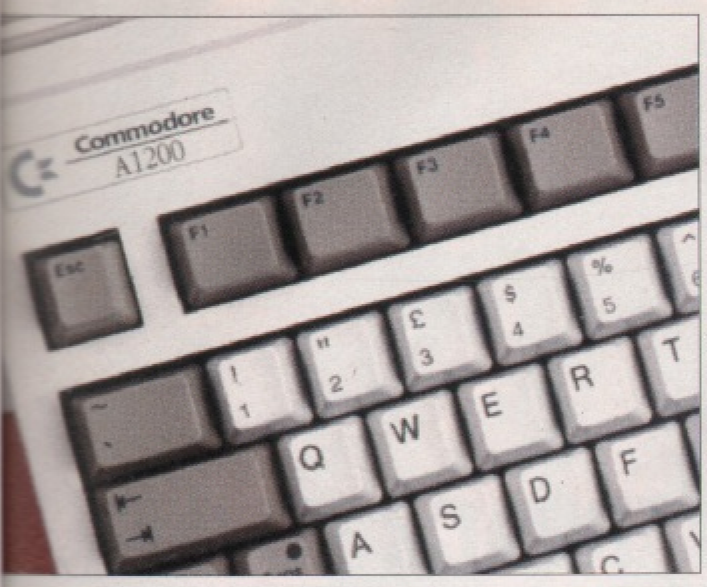
ALL'S TICKETEE BOO AT CBM

Commodore's National Marketing Manager Dawn Levack backed up David's comments: 'As far as we're concerned, everything is "ticketee boo" here at Commodore. Our September results are much better and we'll be back on track by December. We're on target – we've got rid of our liabilities and we're heading for good times".

From a marketing point of view, Dawn was equally enthusiastic. 'Our recent marketing compaign has been excellent. We're getting all the right results. Just look at the recent Gallup polls – we're the number one platform on CD and the CD32 title *Zool* is the number one CD software title. If you look at Marketing magazine (another trade journal), the effectiveness of our TV advertisements are up there with the Andrex adverts!'

Many would claim that Commodore are simply trying to gloss over the bad news, but Andy Leaning, a spokesman for major dealers Silica Systems, backed up Commodore's views. 'The *CTW* story was very misleading and the quote concerning Commodore's ability to continue as a going concern has been blown totally out of proportion. The footnote that *CTW* refers to is actually a standard auditing footnote that makes no judgements concerning Commodore's financial health.

'As far as we're concerned, Commodore's latest set of financial figures are very encouraging and they bode very well for the future. When a company gets into a position where it is writing off millions of pounds, it's very difficult to recover unless you take drastic action very quickly. In our



A1200 have held back the CD32 because we've had to make so many more A1200s. We're certainly not complaining though!"

Rumours have been rife within the industry that Commodore have plans to license the Amiga's custom chips to a number of Japanese electronics giants for the production of Amiga "clones". Whilst some industry watchers believe that this could be a good thing (indeed, it was the existance of clones that saved IBM's ailing PC from the scrapyard!), when questioned whether the licensing of Amiga technology was a possibility, Pleasance was quick to reply. 'There is a possibility the chip set we have abandoned (ECS) will be available for license. Now that we have totally abandoned anything less than 32-bit technology, those chips are now available.

'The growing interest in taking cable or satellite television signals via a black box is certainly a possibility – after all, the Amiga chip set is perfect for handling video signals. As for talk of Amiga clones, that's complete and utter nonsense – that would be the kiss of death for Commodore.'

opinion, Commodore seem to have done just that, although they are negative, the drop in losses is encouraging.'

SALES AND CLONES

Sales of the Amiga are certainly riding high too as Dawn Levack confirmed: 'Sales of the Amiga are flying – we just can't get enough of them! As for the CD32, sales are increasing by 30% each week!'.

David Pleasance confirmed this optimism: 'In the A1200, we have the industry's leading product bar none. In the last six months, we've sold over 160,000 in the UK alone!" In a recent press release, Pleasance described these sales as an "incredible summer" which is unheard of in this industry'.

The CD32 has been doing a lot better than many industry pundits had claimed with Commodore well on its way to selling over 400,000 units worldwide by the end of 1993. In the UK alone, Pleasance firmly believes that Commodore will have achieved sales of around 110,000 units by January 1994 although he admits that sales are not quite as high as Commodore had hoped. 'We admit that sales of the CD32 have been slower than anticipated. I think that this is a result of the market being "fat" at the moment... we're still outselling the Sega MegaCD by as much as four to one though!. We're outselling the competition and we believe that the market is yet to take off."

The incredible popularity of the A1200 is proving to be a problem that is holding back manufacture of the CD32. "We've been inhibited by our inability to manufacturer enough machines. Sales of the

SURVEY CLOBBERED

Commodore's performance isn't the only area of concern, however. A recent trade only survey entitled *The Video Games Industry in 1994* produced by a rival magazine publisher certainly did the Amiga no favours. The survey, which was conducted amongst the top twenty people in the software industry including such big names as Mark Strachan at Domark, Ian Stewart at Gremlin and US Gold's Geoff Brown, contained enough bad news to test the loyalty of even the most hardened Amiga fanatic. To quote this esteemed publication, 'The Amiga seems to be next on the industry's self-imposed hit list. In certain quarters there is almost a race to abandon the format. We do, in fact, seem to be in the middle of a definite and irreversible decline. As far as the games market is concerned, the Amiga's short-term future is bleak and there simply is no long-term future...'

This survey was certainly not greeted with enthusiasm by either Commodore or by those that had taken part.

According to David Pleasance, every single person surveyed expressed dismay at the findings of the survey and they all strongly believed that the final analysis was very misleading.

Commodore have been quick to patch up any damage that the survey may have caused by posting an advertisement in *Computer Trade Weekly* that lists the views of eighteen of the games industry's top players. These quotes certainly make interesting reading and although we don't have space to print them, every single one expresses a continuing commitment to the Amiga games market. This viewed was echoed by Martyn Brown, head-honcho at Team 17 Software. 'We certainly plan to continue to support the Amiga with quite a few new releases planned for next year, especially on the CD-32 and A1200, including *Alien Breed 3D* which makes use of the CD-32's Planar chip. Our A1200 stuff is selling very well indeed - in terms of percentage of machines, the A1200 version of *Alien Breed II* has actually sold better than the A500 version! We're totally committed to the Amiga – the Amiga is still our main development platform.'



GOOD TIMES AHEAD

Both Commodore and the Amiga have suffered their greatest test over the past few months but it seems that finally there is light at the end of the tunnel. With Commodore now fully expecting to be profitable by 1994 and Amiga software vendors still completely behind the machine, it seems that finally the Amiga's future is assured. With both the A1200 and the CD32 selling very well, not to mention the promise of even more powerful Amigas based around the 'Triple-A' chip set and RISC technology just around the corner, the Amiga will undoubtedly continue to be a market leader.

Certain sections of the Amiga press have been very quick to write off Commodore, but perhaps its time for the entire industry to stop kicking Commodore and start applauding them instead. Fighting back from the grips of a crisis that would have spelled the end for many lesser companies is a formiddable achievement that only goes to prove just how clued up Commodore's management really are. Sitting on the board of Commodore UK are some of the most talented businessmen and woman who clearly know what the Amiga is capable of and how to sell it.

Combine this with the sort of brand loyalty and state of the art hardware that other computer manufacturers can only dream about and it's easy to see why both Commodore and the Amiga have managed to weather this latest storm.

All things told, Commodore is possibly leaner and meaner that it has ever been! CU

OF THE AMIGA?

COMMODORE WRITES

With a glass of sherry in one hand and a mince pie in the other, David Pleasance reflects on what has been a memorable year for both the Amiga and Commodore.

Here we are at the end of another year, and what a year it's been. It was only April '93 when I was in Athens for a dealer conference organised by our Greek distributor, when suddenly, out of the blue, I found myself right in the thick of it, appointed as joint Managing Director for Commodore's UK subsidiary. That was just the first of many challenges that were about to reveal themselves over the next few weeks.

In May the corporation announced further large losses, adding to an already extremely dismal set of figures for the first half year.

The major difference this time, though, was the provision of very large reserves to enable Commodore to re-focus and re-structure. Re-focusing consisted of firstly deciding once and for all to get out of the PC market completely, and secondly to concentrate only on our Amiga technology, and, in particular, on nothing less than 32-bit systems. Re-structuring consisted of diverting the resources previously used to support PC products and reducing the overheads of the Worldwide operation to reflect the lower sales figures. This would naturally result from the withdrawal of the PC-based products previously included in our turnover.

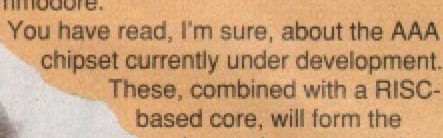
Knowing that the decision to adopt this strategy was taken in late May, we always realised that little or no effect would be evident in our June quarter results. So the plan was to concentrate on our September quarter with a view to reducing the losses and overheads, hopefully resulting in the company being profitable by Christmas.

I am happy to tell you that we appear to be on course, with our September loss being much less than previous quarters, and more importantly, we succeeded in reducing our overheads by 65%.

We are very pleased at the super success we are enjoying with the Amiga CD32. In all my years at Commodore, I have never experienced anything as exciting as the way everyone is reacting to this brilliant product. However, if ever there was a Christmas star, ours has to be the Amiga 1200 Desktop Dynamite pack. I felt this was the best pack my marketing team had ever come up with, but I did not expect such an overwhelming demand for it. A sincere thank you, to all of you who have kept supporting us and especially to those of you who have bought any of our products over the last few months.

Now that we have secured our future I am very excited at what prospects 1994 might hold for Commodore.

You have read, I'm sure, about the AAA chipset currently under development. These, combined with a RISC-based core, will form the heart of our new high end graphics workstations. These will be able to run MS DOS software under *Windows NT* as well as having the best graphics of any sub-$50,000 system!



So, with this new model flagship product, and with the CD32 gaining momentum rapidly, 1994 looks set to be a really memorable year for Commodore. Here's to another exciting twelve months.





QUARTERBACK V6.0

Backing up your hard drive has been a lot easier since *Quarterback* came along. Now it's reached version 6.0, and includes "features that advanced users have been asking for" according to Central Coast Software. Among the improvements are support for high capacity tape drives, faster compression and the ability to back-up a large hard disk across multiple tapes.

Also to be included with the main program is *Schedule Pro*, which allows the running of any AmigaDos program or AREXX script at a preset time. It can also display reminders on screen at given times. Contact Central Coast Software (US) on 0101 512 328 6650.

AMIGA NEXT STEPS

For those who have mastered the basics of the 1200, and now want to go further with the machine, *Amiga Next Steps* could be the book for you. The book tackles subjects such as adding a hard drive, creating a fully recoverable RAM disk, using MultiView and recovering deleted files. As well as getting down to the the grisly bits of Workbench, the book also delves into the world of third party software. Contact publishers Bruce Smith Books on 0923 893493.



GVP'S 16-BIT AUDIO-VISUAL DIGITISER

Potentially the most powerful add-on for the 1200 yet, GVP's exciting new A1230 II board is due out any day now. First of all, the specs for the board itself: 50MHz 68030 processor with integral memory management unit, two SIMM sockets holding up to 64Mb of RAM in various SIMM configurations, a battery-backed clock, and an optional 68882 maths co-processor.

Now here's the best part. The board will be able to accept further peripherals via a through-port connector. GVP already have a real time 16-bit video digitiser in development, provisionally named The Cobra. For music and video fans, Flipper is the name of the 16-bit direct-to-disk sampler that's also in the pipeline. Then there's the A1291 SCSI 2 interface, which will allow the 1200 to use just about any SCSI device, including CD-ROM drives, scanners, Syquest drives, tape streamers and more. Quoted access speeds of the A1291 are 3.2Mbs per second when connected to a Maxtor 540S drive. Further add-ons are promised in the near future.

We'll have a review of the A1230 II in the next issue. For more information contact Silica Systems on 081 309 1111.

NEW RAM FROM DKB

American hardware developers DKB have just struck a UK distribution deal with Silica Systems, resulting in the imminent release of three new RAM boards. For the 1200, there's yet another trapdoor expansion board, the DKB 1200 RAM Board. The basic board comes with a 16MHz 68881 maths co-processor and two unpopulated SIMM slots, at a price of £129. Silica claim this is the first 1200 RAM board to use two industry standard SIMMs, rather than the higher-priced SIMMs used by other boards.

For the A3000 and 4000, DKB have a 32-bit Zorro III RAM board. The four SIMM slots can accommodate up to 128Mb of RAM, and can also use different capacity SIMMs simultaneously (such as 4Mb and a 32Mb SIMM for example). The unpopulated board comes in at £269. Finally there's the DKB Megachip 1Mb Chip RAM upgrade for the A500, 1500 and 2000, which is available for £154. Contact Silica Systems on 081 309 1111.

TRY THE SIM FAST DIET

Sim City is set to make a welcome return to the Amiga in April, thanks to Maxis, Mindscape and the programming talents of John Jones Steele, the man responsible for the Amiga versions of *Sim Life* and *Sim Earth*, in the form of *Sim City 2000* – the game that looks set to show God games once and for all 'how it's done'. Set years ahead of the original *Sim City*, it features more buildings, more people and more disasters than the original, so it should be well worth looking out for. We'll have a full work in progress in the next couple of months.

NEW GAMES FROM CORE!

Core are lining up a whole host of goodies for the first half of 1994. The lead title has to be *Bane Of Asgard*, otherwise known as *Heimdall 2.* Written and designed by the pair who created the original Amiga stunner – Jerr O'Carroll and Jedd O'Connell, their aim was brief and to the point: make it bigger and make it better. Later in the year comes *Skeleton Crew*, the comic book, sci-fi, beat em 'up which sadly has nothing to do with the Stephen King novel, but sounds interesting all the same. Finally we have Core's first proper RPG, *Dark Stone.* A top view, medieval affair, details are sketchy, but Core have one heck of a busy year ahead of them! Contact Core on 0332 297797.



FRIENDLY FLOPPY DRIVE

First in Amitek's "Friendly Technology" range of peripherals, the Friendly drive is based around a Sony mechanism, and comes with both anti-virus and anti-click features. There's also a disable switch and a through port for daisy chaining further external drives. With a two year warranty, the drive comes in at £59.00. Contact Silica Systems for further infomation on 081 309 1111.



AMIGA TOP TEN

What's this? *Frontier* slips a place, as Gremlin's sequel to Zool comes kicking and screaming onto the Amiga. *Hired Guns* plummets, *Alien Breed 2* drops as does *Body Blows Galactic. Premier Manager 2* is still rising, showing the longevity of football management sims and *Jurassic Park* jumps straight in at number 4!

1. *Zool 2 (Gremlin)*
2. *Frontier - Elite 2 (Gametek)*
3. *Premier Manager 2 (Gremlin)*
4. *Jurassic Park (A1200) (Ocean)*
5. *Alien Breed 2 (Team 17)*
6. *F117A Night Hawk (Microprose)*
7. *Body Blows Galactic (Team 17)*
8. *Wonderdog (Core)*
9. *Hired Guns (Psygnosis)*
10. *Alien 3 (Virgin)*

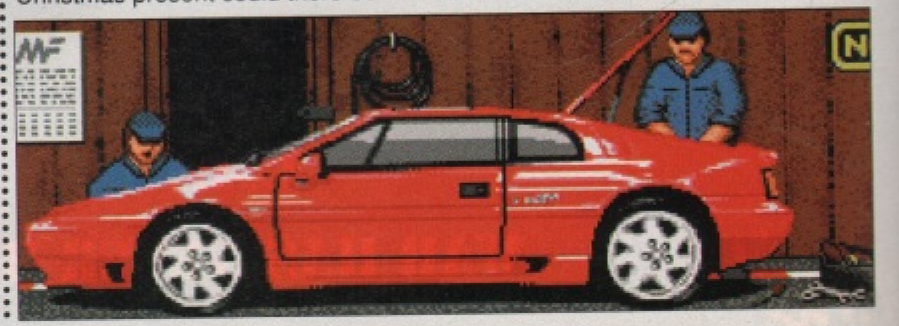
Charts supplied courtesy of Level One, HMV.

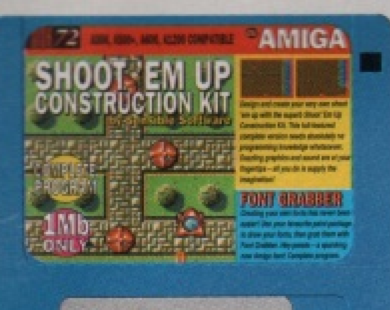
AMOS IN EDUCATION

No doubt about it, educational software has definitely benefitted from AMOS. It seems almost every education program on the Amiga was written with it! With this in mind, Anne and Len Tucker have come up with a book designed to improve your own educational AMOS creations. The book, *AMOS In Education*, is not aimed at commercial software developers, rather at the parent who wants to give their children something more constructive to do with their Amiga than just playing games. A disk containing the source code from the examples is available free on application with the form provided in the book. Contact: Kuma Books Ltd, Pangbourne, Berkshire. Tel: 0734 8 44335.

TRIPLE THE HORSEPOWER

Any Amiga owners smarting about the fact that the *Lotus Trilogy* from Gremlin is only available on CD32, smart no more. News has just reached us from the frozen wastes of Sheffield that the said package, featuring no less than all three Lotus games (*Lotus, Lotus 2* and *The Final Challenge*) will be available in floppy format shortly after this issue hits the shelves. Whether you thrill to the lap-bound antics of the first, the weather-bound thrill of the second or the designing spills of the third and final instalment, here they all are. What better Christmas present could there be? And all this for £29.99.





COVERDISK 72

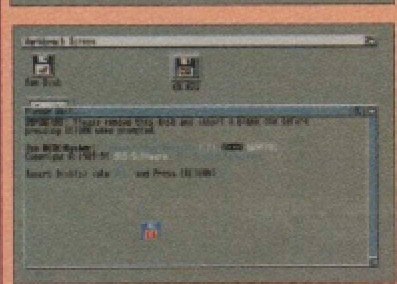
SHOOT 'EM UP CONSTRUCTION KIT

YOUR QUICKSTART GUIDE TO LOADING DISK 72

WRITE PROTECT YOUR DISK!
Before you can use any of the programs on disk 72, they need to be decompressed onto new disks. You'll need three disks to hand, but they needn't be formatted.

1. Insert disk 72 into DF0: and turn on the Amiga.





2. Double click the disk 72 icon, and then double click the seuck1 icon.
3. When prompted, insert a blank disk (which needs to be write-enabled), and press Return.
4. Replace disk 72 when it asks. To decompress the other two disks, repeat the process from step 2, clicking the remaining disks instead.
5. The *Shoot 'Em Up Construction Kit* (*SEUCK*) can then be booted from the two new disks. *Font Grabber* must be run through *Workbench*.

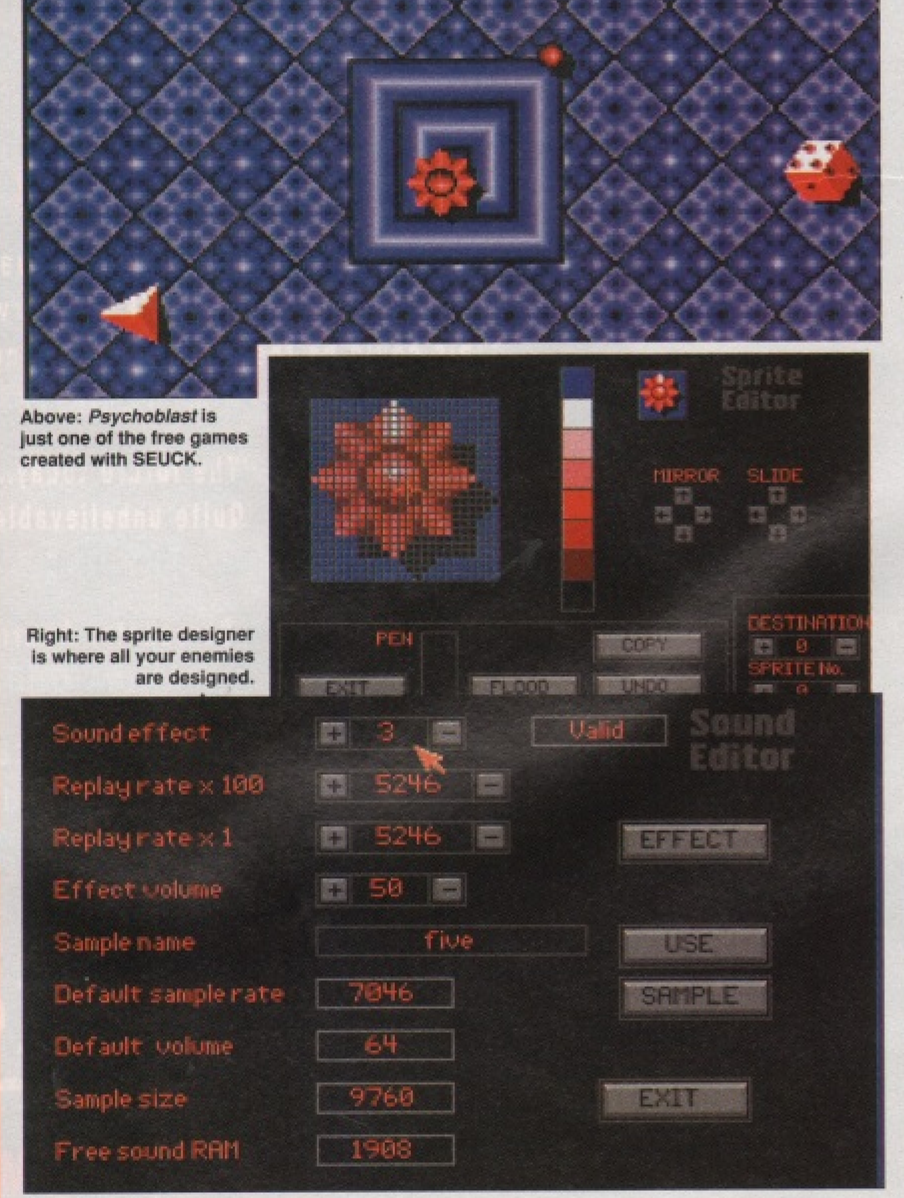
SAVING YOUR GAME

Get into the habit of saving your game every so often, and make sure you've got a formatted disk to hand before you begin. Use the Storage option when you want to load or save. You can save out your data as separate parts (sprites, backgrounds or levels only, for example), or save out the whole thing. Save Everything is most useful, as it saves the complete game.

Load data
Load background
Load sprites
Load objects
Load attack waves
Load levels
Load sound effects
Load everything
Exit

Use either the stick or mouse to control the menus.

The *Shoot 'Em Up Construction Kit* gives you the chance to design and create your very own shoot 'em up. Everything is controlled by the mouse and joystick, and there's no need for any programming knowledge whatsoever. Even an absolute newcomer to computers could knock up a decent game in a couple of hours. Whether you want to write the next *Cannon Fodder*, or create your own original blaster, it's all at your fingertips with *SEUCK*.



Above: *Psychoblast* is just one of the free games created with SEUCK.

Right: The sprite designer is where all your enemies are designed.

Using IFF sound samples, you can really bring your shoot 'em up to life. There are some included on the disk, or you can use your own. Hey, why not use a hardcore breakbeat for an explosion?

DO IT YOURSELF

How about having a go at creating a game from scratch? Your games can be set on still screens, fixed-rate or player-controlled vertically scrolling backdrops. For this example we'll use a fixed-rate backdrop, as demonstrated with the *Slap and Tickle* game on the disk. If you've previously loaded one of the games, it's best to re-load the whole *SEUCK* program to get a clear system.

SPRITES

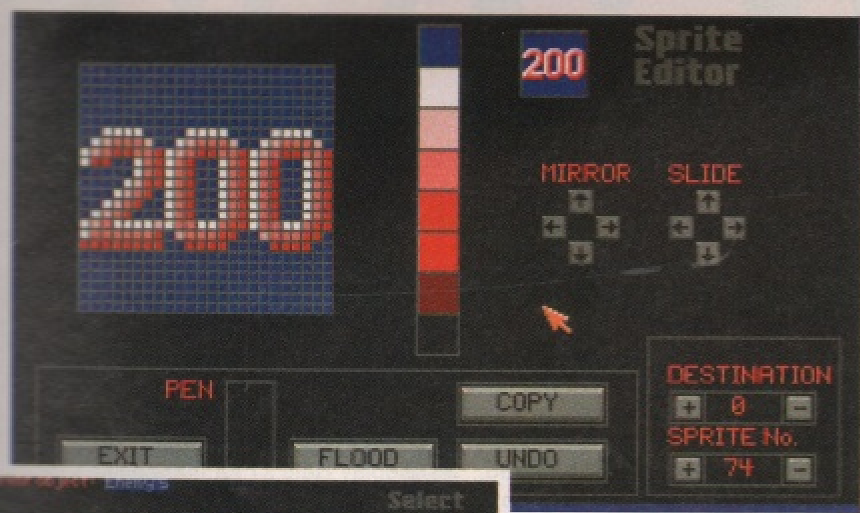
Sprites are the graphics used for your spaceships, aliens, bullets, men and explosions – everything in the game that isn't part of the backdrop. The Sprite Editor is a good place to start, so select Edit Sprites from the main menu, followed by Edit Sprite. You'll now be in the Sprite Editor.

The grid on the left is an expanded view of the current sprite. You can draw in the grid by holding down the left mouse button, and change the pen colour by choosing a different shade from the the bar in the middle of the screen. To change the palette, select Edit Colours from the Edit Sprite menu. Make the first sprite a spaceship, or whatever you want your player's character to look like. Be careful of the Flood button, as it can wipe out a sprite in a single blow. This is reversible with the Undo button.

If you want your sprite animated, click the Destination button once so that it shows 1. Click the Copy button to duplicate the current sprite (number 0) into sprite number 1. You can then move to sprite 1 with the Sprite No. button, and alter the duplicate slightly to make a second frame of animation.

OBJECTS

Before a sprite can be used in the game, it has to be assigned to an object. The difference between sprites and objects is that sprites are the images used for the aliens and



Above: Sprites can even be used to display bonus scores and other info.

Left: Animating your sprites is easily done. Simply place the frames in your chosen order, and enter the number of frames.

characters, but objects are the aliens and characters themselves.

From the main menu, select Edit Object twice. You'll see a bank of identical sprites. The name of the current object is displayed at the top of the screen, and will probably be showing player 1. At this stage sprite 1 will be set up for player 1, so you shouldn't need to change anything here. If you were defining another object (enemy 1 for example), then you would need to select the appropriate sprite, then click on the top left spot on the sprite grid. If you've drawn a few frames of animation, you'll need to select each one, and place them on subsequent spaces in the sprite grid (going from left to right starting with the top row). By changing the Last Frame value, you can define the number of frames that are used in the animation. Delay Value sets the speed of the animation. You can see how your animated sprite will look in the Animate window.

Once you've got your head around that, you can repeat the sprite and object generation process for your aliens, bullets and explosions. The basic objects you'll need to define are player 1, player 1 death (explosion), player 1 fire, enemy 1, enemy 1 fire and enemy 1 death. You can use the same death/explosion sprites for the enemy and player, and also use the same bullets to save time.

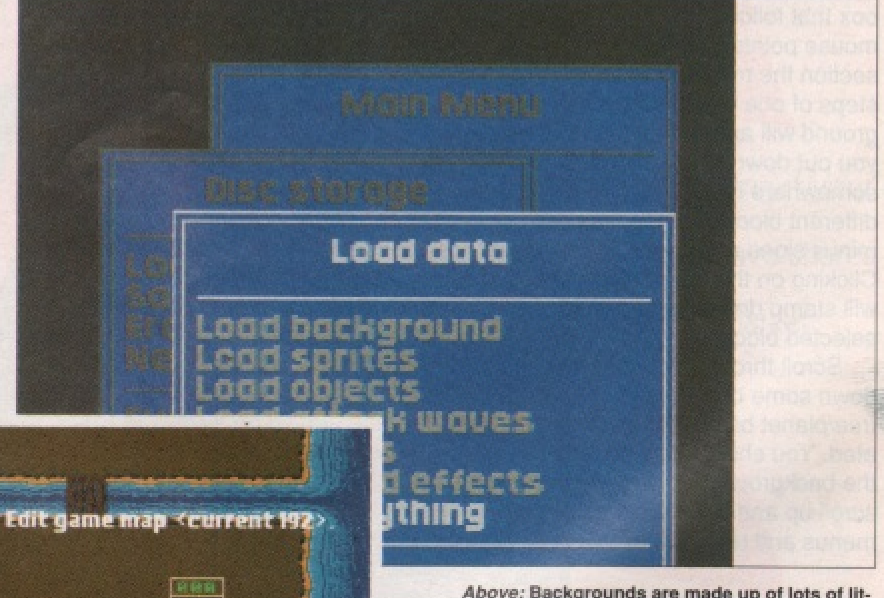
PLAYER LIMITATIONS

Before you can see your player sprite in the game, you'll need to activate it and set up a few parameters. Choose Edit Player Limitations followed by player 1 and Edit parameters. Use these settings for now: player enabled (yes); lives (5); ship speed (3); score colour (2); amount of bullets (3); directional fire (no); bullet duration (14); bullet speed (15); fire rate (3); extra life (yes). You can work out exactly the best settings a little later. Exit this screen, and select Edit Play Area. Use a combination of the fire button and joystick to mark out the invisible boundaries for the player sprite. Exit back to the menus with the right mouse button. Select Edit Starting Position, and move the crosshair into the middle of the screen from the top left corner.

Now is an appropriate time to check that everything is working as it should. Go back to the main menu and select Test Game, and choose either Cheat or Proper test. With any luck, you should see your player 1 sprite on the screen, and should be able to move it around with the joystick. If not, go back and check over what you've done so far.

BACKGROUNDS

Next we need to create a background. *SEUCK* makes its backgrounds from a bank of blocks.



Above: Backgrounds are made up of lots of little blocks, allowing you to make massive scrolling levels from just a few basic designs.

Left: Creating the levels is just a matter of pasting down the pre-drawn blocks.

These blocks are pasted together to form the expansive scrolling backdrops to the game. Select Edit Background followed by Select Block. The black screen you see is actually a patchwork of blank background blocks. Move the square into the top-left corner of the screen and press the right mouse button (this will select the first block in the bank). Choose Edit Block, and draw out a rough pattern such as stars, or a stippled desert/grass type of texture. Go back and test the game, and you'll find the background is now made up the block you've just drawn, repeated over and over to fill the screen.

Move back to the Edit Background menu, click on Edit Block, click the Block No. buttons to move on to block 1, and draw out another block, this time with a tree, planet or some other feature. Exit from the Block Editor, and select Edit Map. You can scroll through the »

STANDALONE GAMES

So, you've finished your game, and you want to turn it into an auto-booting disk. Here's how it's done.

1. Load *Workbench* or boot from your hard drive.
2. Open a Shell or CLI window, and type resident c:makedir (RETURN) resident c:copy (RETURN)resident c:rename RETURN resident c:dir (RETURN) resident c:ed (RETURN) resident c:install (RETURN).
3. Format a disk in df0: and in the CLI/Shell window, type makedir df0:edit-files (RETURN).
4. Insert the second *SEUCK* disk into DF0: and type copy df0:"default game" ram: (RETURN).
5. Wait for the drive light to go out, then swap the *SEUCK* disk for the data disk that contains your *SEUCK* game. Presuming your game is in the main directory on the disk, type copy df0:mygame.all ram: (RETURN) (where mygame.all is the filename of your game).
6. When the light has gone out, insert the newly formatted disk into DF0:. Type copy ram:"default game" df0: (RETURN) copy ram: mygame.all df0:edit-files (RETURN).
7. Type rename df0:"default game" "mygame game" (RETURN) (replacing mygame with the game's filename without the .all extension).
8. Type install df0: (RETURN) makedir df0:s (RETURN) ed df0:s.startup-sequence (RETURN).
9. From within Ed, you now need to make a startup-sequence. All you need is one line which should read "mygame game" (including the quotes), where mygame is the filename of your game without the .all extension.
10. Use the menu to save the sequence as startup-sequence and save it in the S directory in DF0:.
11. Your game should now autoboot from this disk.
12. If you want to change the loading screen, save out your design as an IFF file into the main disk directory, and call it The logo (with a space between the two words).

ADVANCED FEATURES

After you've got your basic game up and running, try out some of these tricks to add a bit of spice to the proceedings.

LEVEL BOSSES

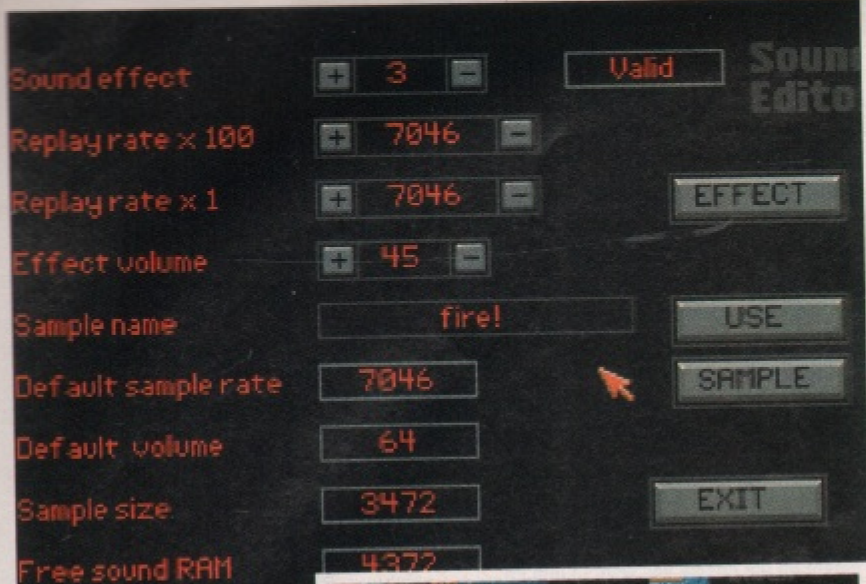
No shoot 'em up is complete without some end-of-level guardians, and there's no reason why your *SEUCK* game should be any different. Even though the basic sprites used by *SEUCK* are quite small, you can join a number of them together to make one big enemy. Use the Join Enemies option from the Edit Attack Waves menu. From here you can select your enemy, and then click the Place button to get to the level map. Scroll to the required position, and then click the cursor on the enemy you want to join up with. Now you can select the offset, which determines how close or far apart the two sprites will be. This is handy when you've designed a number of small pieces to be fitted together as one, where you need to mask any joins in the sprites. Repeat the process to add more to the cluster.

TWO PLAYER GAMES

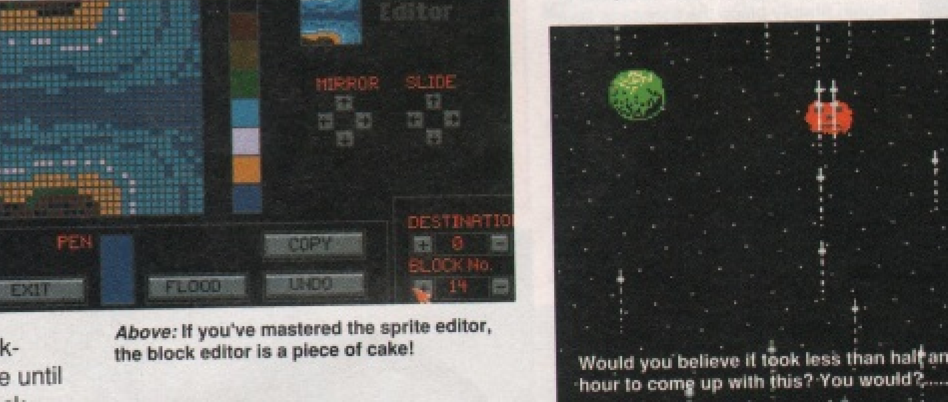
Simultaneous two-player games are easily created. Player 2 needs to be set up with its own sprites, speed, fire rate and other parameters, given sound effects and enabled. In fact, everything you set up for player 1 has to be set up for player 2.

LEVEL PARAMETERS

Levels can be one of three types: scrolling, push-scrolling or still. Push-scrolling levels move when the player pushes against the top of his allotted area. The *Blood 'n' Bullets* game on the second disk uses this method. You can select the type of level from the Edit Levels -> Edit Level Parameters option. From here you can also select the speed of the scrolling (higher numbers mean slower scrolling), the duration of the level (if you want it to end before it reaches the end of the map), and whether new levels scroll on directly from the previous one, or start from a clear screen. You can, of course, have more than one level. Switching the current level counter allows you to create new levels, and edit previous ones.



Above: Various sound effects can be created from one sample by changing the playback rate.



Above: If you've mastered the sprite editor, the block editor is a piece of cake!

Would you believe it took less than half an hour to come up with this? You would?....

background map by clicking the left mouse button on the up and down arrows found in the little box that follows the mouse pointer. In this section the map scrolls in steps of one block, so the background will appear not to move until you put down your second block somewhere in the map. To select a different block, use the plus and minus signs also found in the box. Clicking on the top portion of the box will stamp down the currently selected block.

Scroll through the map and stamp down some copies of your tree/planet block that you've just created. You should now be able to see the background moving when you scroll up and down. Exit back to the menus and test the game again.

FREE GAMES

To help you get an idea of what's possible with *SEUCK*, there are three games already included on the second disk. Before you start messing around with it yourself, why not load them up and have a quick zap? Your second *SEUCK* disk should be in DF0: already. If it isn't, put it in now.

Using either the mouse or a joystick, select the Storage option from the main menu, followed by Load Data, followed by Load Everything. A list of three files will appear after a few seconds. Click the mouse on the one you want to load. Once you're back at the menus, click Exit twice, then select Test Game from the main menu. There are two options you can choose here. Cheat Test gives you infinite lives, while Proper Test just gives you your allotted amount. To exit back to the menu, hold down both mouse buttons.

By the way, if you happen to be playing a two-player game in Cheat mode, you need to replace Joystick 2 with the mouse when you want to get back to the menus. Feel free to mess around with the menus and switch back to the game to see which options change which parts of the game.

ENEMIES

So far, we've got a scrolling background and an armed player sprite. What we need now is an enemy. You should have already set up an enemy with a sprite in the object editor, but you'll still need to define its various parameters such as speed, fire rate and so on. From the Edit Object option, choose Edit Enemy Bits. Set the parameters to any numbers you fancy, making sure that none of them are left at zero (otherwise you could find that your alien refuses to move or shoot for no apparent reason). You can come back and alter these once you've seen how they work. Set all four of the collision detection options to 'yes'. Exit back to the main menu when you've finished.

Choose Edit Attack Waves from the main menu, then Insert Enemy. This takes you to a screen where you're asked to select your enemy. With enemy 1 selected, click on the Place button.

You'll be presented with a map of the level, which you can scroll through with the joystick. Find the spot on the level where you want this particular enemy to appear, press Fire, and then scroll it a little on the finer setting if you need it.

Now you can position the sprite to define its precise start point, then draw out its flightpath with the joystick. Press the right mouse button when you've finished, and move the joystick to the left to confirm, or right to cancel.

Test the game once more to see how your aliens have come out. Once you've got the hang of the attack waves, you can go on adding as many as memory will allow.

LET THERE BE NOISE

SEUCK uses IFF samples for all its sound effects. Collect a few IFF samples together, and put them on disk in a directory called sounds for this example. If you don't have any IFF samples, you can get hold of some from any PD library.

Select Edit IFF Sound, then the New IFF Sound directory. Type in 'sounds' and press Return. Click on Load IFF Sounds, and the contents of the sound directory will be listed. Click on the samples you want to use, and they'll be loaded so long as you've got enough free memory. Next you need to select Edit IFF Sound Effects. You can use the same sample for different sound effects. For example, you could use a zap sound played very quickly for a laser effect, and the same zap sample played very slowly for an explosion.

The first thing to do when setting up a sound effect is click in the Sample Name box. The left mouse button cycles through the available samples. Next click on Use, and then alter the playback rate and volume level. A volume of zero is silent, while 64 is the loudest setting. Use Replay Rate x1000 for coarse tuning, and Replay Rate x1 for fine tuning. The Sample button replays the current sample at its default rate, but the Effect button replays it at your chosen rate. Use the Sound Effect Counter to move onto new effects. When you've got a few basic sounds together (explosion and fire will do for starters), you can enter the Edit Object ->Edit Enemy Bits screen, and assign the effects to the enemies.

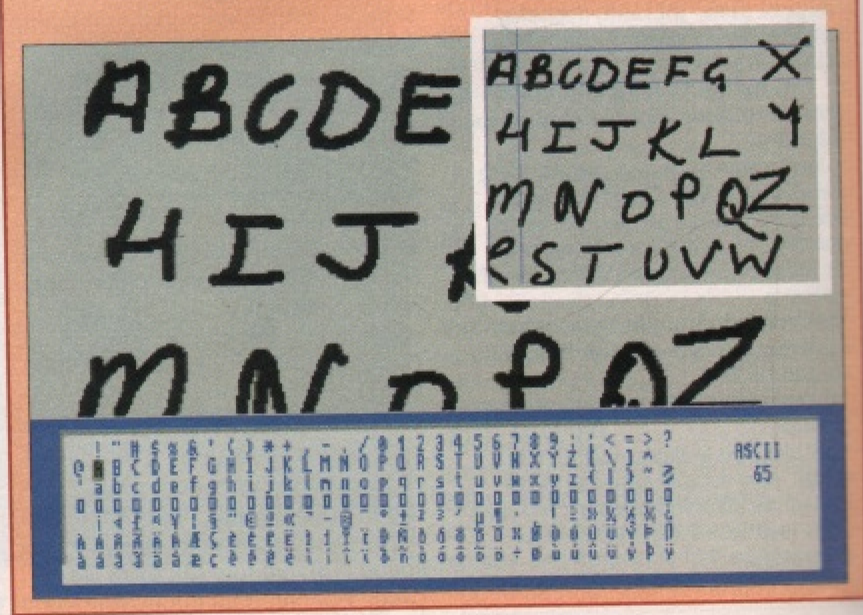
Do the same for player 1 via the Edit Player Limitations -> Edit Parameters screen. CU

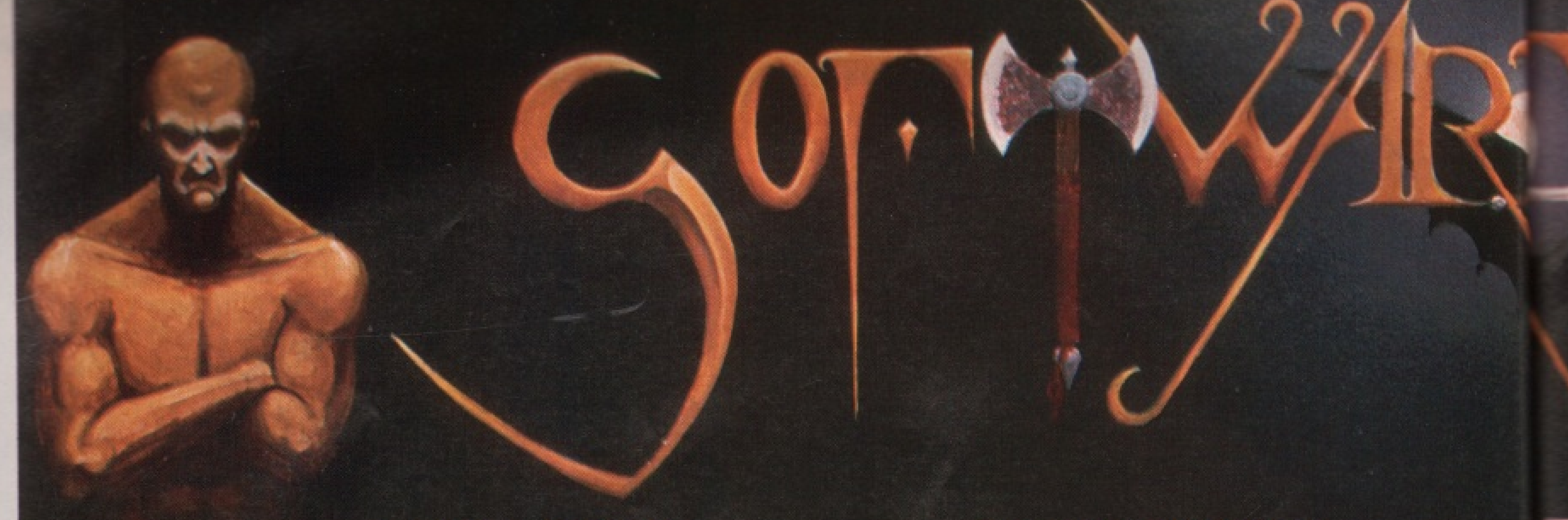
FONT GRABBER – COMPLETE COMMERCIAL PROGRAM

Font Grabber is a tool for creating your own bitmapped Amiga fonts. You can design your fonts with your favourite graphics package, then convert them into fonts with *Font Grabber.*

Before you load *Font Grabber*, you should draw out an alphabet on a single screen with *DPaint* or some other graphics package. Save the screen out to disk. Load Workbench, then insert your de-compressed *Font Grabber* disk. Double click the *Font Grabber* disk icon, and then double click the *Font Grabber* program icon. From the Files menu, select Load IFF, insert the disk that contains your font, and load the image.

Choose Select Character from the font menu. Highlight the letter A, and click the left mouse button. Move the mouse pointer to the top left corner of your A on the IFF screen, hold down the left button and move the mouse to the bottom right corner of the letter, so that the box encases the letter. Release the mouse button, and select Next Character from the font menu. Repeat the process of boxing off each letter, then selecting Next Character from the menu, until you've done the whole alphabet. You can then save out the font with the Save Font option from the file menu. The font can then be loaded into *Deluxe Paint* and a number of other graphics, DTP and video applications.





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COVERDISK 73

Well, if CU Amiga isn't the hottest and the best, then I'll eat my crisps (Cheese 'N' Chives - Urgh!). What's the biggest game this Christmas? Which game has more advertising than any other ever? What are we giving you a complete playable demo of? Acclaim's *Mortal Kombat*, of course. Would you ever expect less?

MORTAL KOMBAT

What kind of background do you need? *Streetfighter 2* came out, and was hailed as the greatest beat-'em-up ever, and then came *Mortal Kombat*. In many ways it was a lot like *Streetfighter*, it had a variety of characters with different abilities, a collection of different back grounds and more special, hidden moves than you could ever hope to have the time to learn.

It also brought something new – digitised graphics. A bunch of martial arts experts were filmed, and then placed in a game to obey the player's every command. Perhaps not the most dignified way to get famous, but then what is?

Anyway, to cut a long story short, *Mortal Kombat* has finally come to the Amiga, and it has done it in style. Last month's 93% mark should have told you that, but just in case you didn't believe us, here is a complete one- or two-player playable level from the game! Choose to play either Sonya Blade or Lui Kang, and get your kicking finger ready!

THE RULES

Come on, a game like this doesn't really need many rules. There are a few guidelines you might want to take note of, if only because they're going to leave you with some very high scores. The obvious thing to point out is that it's a best of three. If any player wins two fights in a row, then you don't fight a third, but you don't need to be told that, do you?

There are no restrictions on combat at all. Use any means you can, including any special or death moves you may have to finish the job. Just finish in the time allotted. If you run out of time, then the person with the least damage scored against them wins.

If you are good enough to finish a bout without taking a single hit, then you score a Flawless Victory, and get yourself a 200,000 point bonus. Do it again, for a Double Flawless Victory, and not only do you get endless praise from all your mates and droves of the opposite sex beating a path to your door, but you also get an enormous 500,000 point bonus.

If you are about to win the second of your two bouts, you will be prompted to finish him or her. At this point you should use your death blow to land a whopping 100,000 point fatality bonus. If you have pulled off the blow correctly, the screen will darken.

Ready to fight?

THE MOVES

Remember grasshopper, you have to walk before you can learn to run. Don;t start dreaming of special moves before you've mastered the basic moves of the characters, and to help you out, here's the whole list.

WALK

To walk in a direction, just point the joystick the way you want to go. No fire button, nothing at all.

STANDING BLOCK

Like most games of this ilk, pulling the joystick in the direction away from your opponent with the fire button held down blocks their attacks on you. In *Mortal Kombat*, it doesn't do it as perfectly as you would hope. Each blow still takes a little energy away, so don't just stand there getting hit if you can help it.

LOW PUNCH



To do a single low punch, push the joystick towards your enemy and press the fire button twice. To do a series of.fast punches, press the fire button rapidly and continuously.

HIGH PUNCH

Exactly the same as the low punch,



except you don't move the joystick. Keep it central and tap the button twice to let out a punch, or repeatedly to unleash a fury.

LOW KICK

A low kick is performed in the same



way as a low punch, except you only press the fire button once. If you are close to the character, you will use your knee instead of kicking.

HIGH KICK

To pull off a high kick, centre the joystick and tap the fire button once. Is this the easiest move in the world to pull off, or what? However, be careful, if you are too close to the opponent, you'll throw them over your shoulder instead.



ROUNDHOUSE KICK

Once regarded as the cornerstone of early beat 'em ups, like Way Of The Exploding Fist, the Roundhouse is a fast and powerful kick, and one that is quite hard to block. To perform one, push the joystick in a down diagonal towards your opponent.

CROUCH

To get out of the way of high blows and any kind of magic missile, pull down on the joystick.

CROUCHING BLOCK

In the same way as the standing block, the low block doesn't completely defend. If you still want to use it, pull down on the joystick to crouch, and then push the joystick down and away from your opponent.

CROUCHING KICK

A very fast and quite surprising move, the crouching kick is the best way to get out of tight corners. To do one, pull down to crouch, and then move the joystick down and towards your opponent . No fire button is needed.





LEG SWEEP
Possibly the hardest move to avoid, and if you're playing against Sonya, impossible to get away from. To sweep someone, pull down and away from them without crouching.

UPPERCUT
If done correctly, this is the move that creates the most blood. Pull down on the joystick and then hold down the fire button, and just watch your opponent fly backwards across the screen.



JUMP
Do you really need a description of what a jump is? Just press up to leave the ground.

SOMERSAULT
Some games just let you jump forwards. Not *Mortal Kombat.* Pushing in an up diagonal has you flying across the screen, flipping end over end, in a way that only a true show off can appreciate.

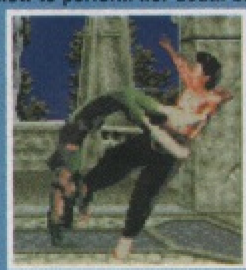
JUMPING PUNCH
Jon Sloan could pull this one off, though no-one knows how. To pull one off in the game, jump up by pushing up, then once you are in the air, centre the joystick and then press the fire button. This might take a little practice.



FLYING PUNCH
This is the same as a jumping punch, except that you are moving across the screen. Push the joystick in an up diagonal to start your somersault, then let go of the joystick and press the fire button.

SONYA BLADE

Sonya is one of the most popular characters in the game, and it's not just because she's a woman in a leotard – Sonya is capable of some quite amazing flips and bends. Again she has four special moves, and once again we're not going to tell you how to perform her death blow, which in this case goes under the delightful name of The Kiss Of Death.



PALM PUNCH
This takes the place of the high punch when Sonya is near her opponent. Just watch those bones crush.

LEG TOSS
Possibly Sonya's most effective move, the Leg Toss involves doing a handstand, wrapping your feet around your opponent's neck, and then throwing them across the screen.

A tricky move in theory, but surprisingly easy to pull off. Just pull down twice, and then press the fire button.

HIGH FLYING PUNCH
If you're having trouble stopping Lui Kang because he keeps leaping all over the shop, then this little move should even out the balance a little. Just push the joystick towards your enemy, then push it away and finally press the fire button with the joystick centred to complete the move.

JUMPING KICK



A little less effective than a jumping punch, and a little easier to perform, push and hold the joystick up to jump, and then press the fire button with the joystick held up.

FLYING KICK
You should be able to figure this one out. Push in an up diagonal to start a somersault, and hold down the fire button once in flight.

There are all the basic combat moves for you. To check out the special moves for the two characters in the game, just check out the panel on that character.

LUI KANG

Lui Kang, one time member of the White Lotus Society and now a monk and fisherman, is one hard basket. He has four special moves for you to master, but we're only going to tell you three of them. The fourth – The Helicopter Death Blow – is down for you to work out.

ELBOW
This move is performed in the same way as the High Kick, and replaces the High Kick when Lui Kang is close to his opponent.



SUPERSONIC KICK
Almost impossible to block, this move has Lui flying across the screen at high speed with a kick that could take someone's head off. To do one, push the joystick away from your opponent, then towards them and then press the fire button.

FIREBALL
Where would we be without a fireball capability? Back in the eighties, that's where. To get Lui to fire a burst of pure energy, push the joystick toward the opponent twice, and the press the fire button.



IF YOUR DISK WON'T LOAD

If your coverdisk doesn't seem to work as it should, then follow this simple guideline. Firstly, remove all unnecessary peripherals, such as printers, modems etc. Follow the instructions of these pages to the letter, and if after that you find that the disk still doesn't work, call the PC Wise helpline on 0685 350505 between 1030 and 1230 Monday to Friday. If they advise you that the disk is faulty, then pop it in an envelope with a covering letter explaining the problems to:

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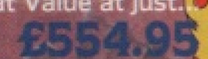


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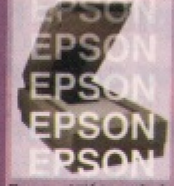
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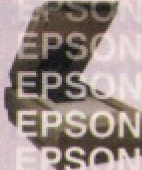
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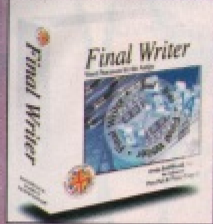
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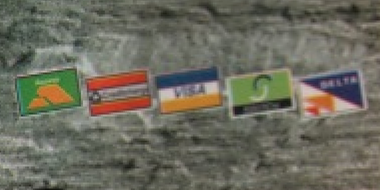
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ANIMATION AND GRAPHICS SPECIAL

Professional animators and graphic artists alike are beginning to realise the vast potential of the Amiga. Mat Broomfield plonks himself in a front row seat and takes a look at how Amiga animation has made the leap from computer monitor to silver screen.



Whether or not you watch TV or go to the cinema, it's almost certain that you will have heard of, and probably seen at least one shining example of the Amiga's incredible versatility as a video production tool. Whether it's Aladdin, Jurassic Park, Seaquest, Animaniacs or Babylon 5, the Amiga has demonstrated its abilities in impressive style, and that's just the tip of the iceberg.

YOUR FLEXIBLE FRIEND

The thing is, the Amiga offers so many ways of creating and manipulating graphics, and I'm not just talking about the new AGA machines either. In terms of conventional animation, the Amiga has an array of custom chips which give it an unbeatable combination of high resolution, lots of colours and the power to move them around the screen at a decent speed. That's not to say that a bog standard A500 is going to be capable of full-screen HAM mode animation, but that's not the be all and end all of things in any case.

Professional animators have been using a Chromacolour system to produce quick pencil tests prior to colouring their work. The system consists of a frame and animation bed. Each piece of hand drawn-animation is placed onto the bed of the unit and clipped into the frame for uniformity. Above the bed is a rostrum camera which points downwards at the paper below. The camera is linked to a digitiser which is, in turn, linked to an Amiga. By digitising successive frames, animators can check that the motion of their characters is as they intended before passing the image over to be coloured in. The advantage of this system is that animators would otherwise have had to do the same job using costly and time consuming film.

AND FOR THE ANIMATOR ON A BUDGET

For the semi-pro animator, there are a couple of dedicated Amiga software packages that ensure you never even have to come near a piece of paper. The first one, *The Disney Animation Studio*, was produced by the Disney Studios themselves so you can be damned certain that it's been designed with the finished results in mind. *The Disney Animation Studio* offers five levels of onion skinning and a quick means of sketching your frames. Although it's a few years old now, the basics of two dimensional animation haven't changed so it's as relevant today as it ever was.

Presumably not wanting to be left out, Disney's arch rivals in the cartoon business Hanna Barbera have just launched their own package called the *Animation Workshop*. Forthcoming from Empire, it's a cartoon animation package with the emphasis on speed and simplicity. Including some innovations such as built-in digitiser (requiring a Rombo digitser cartridge) for converting hand-drawn frames to mono bitmaps, and making extensive use of onion skinning techniques as used by traditional cartoon animators, it aims to carve a niche for itself as a no-nonsense cartoon creation system. to get you started there'll be officially licensed Hanna-Barbera clips and animations including Scooby Doo. The Flintstones, Yogi Bear and The Jetsons.

Undoubtedly, the greatest movie revolution has been brought about by the accessibility of 3D programs which can be used to add a new dimension and level of realism to animations.

Although *Tron* was the first to demonstrate the startling effect to which computer graphics could be used, it was films such as Terminator 2 and the Abyss that really got the ball rolling. To be fair the Star Trek movies had incorporated extensive use of 3D computer graphics to excellent effect, in scenes such as the time travel and Genesis sequences. However, it was the stunning fluidity and total realism of the T1000 robot in Terminator 2 and the water probe in the Abyss that really triggered everyone's imaginations.

Speaking of imaginations, *Imagine* is one of the most widely used 3D ray tracing packages in the world, and because it's also available on the PC, Amiga owners benefit from a wide selection of ready-made 3D object sources.

THE AMIGA AT THE MOVIES

As I've already mentioned, the Amiga has been used to help with many TV and film productions. Here's a selection of the places it's been used:

- Seaquest - On LWT Sundays 6.30pm - Video Toaster used to create the titles and all underwater exterior machine shots (subs, bases, etc).
- Babylon 5 - Available on video - Video Toaster used extensively to create all spaceship exteriors and many internal effects as well.
- Jurassic Park - In the cinema - Several hundred Video Toasters were used to create 3D previews of the dinosaur animations prior to them being rendered on the faster graphics engines.
- Animaniacs - Likely to be shown in Europe in early '94 - The titles were all done in ultra high resolution using GVP's new Advanced Graphics System.
- Robocop 2 - Available on video - The face graphics of the maniac robot were done on the Amiga.
- Aladdin - In the cinema - The 3D sections were done using *Imagine 2*.

Before I go any further, quick explanation of the way that 3D prgrams work: objects are defined as a kind of three dimensional mesh. The surface of the mesh can be given colour, texture and reflective properties just like real objects. Unlike real objects, these 3D 'models' as they're called, can be squished and distorted, moved and resized at will. This makes them ideal for circumstances where a particular effect would be either physically impossible to recreate (a car turning into a rocket for example) or would be too costly (such as the animation of space ships or submarines).

CARTOON HELPERS

These models can also be used as a template in two-dimensional animation, and this is exactly what happened in Disney's Aladdin. There are four scenes in the film where an exceptional level of three dimensional realism was called for. Using conventional animation techniques, these scenes would have been impossible.

For example, throughout the film a Persian carpet flies to and fro, and has a personality all of its own. Now that may seem unremarkable until you consider the fact that the carpet has a complex pattern on it, which, of course, has to twist and turn in perfect synchronisation. So what was the solution? Simply define a carpet model in *Imagine* and map the pattern onto the model so that the two move as one.

Now it's simply a matter of moving the carpet within the frame safe in the knowledge that the pattern will always perform as it should. Another important effect is the carpet ride from the collapse caverns. Aladdin and his monkey ride on the magic carpet whilst all around them the Tiger caverns are collapsing and exploding. This calls for a high level of perspective calculation, but with a 3D package, the computer takes care of that, leaving the animators more or less free to concentrate on the surrounding action.

Of course, I wouldn't want to minimise the effort put in by Disney's team. The 3D program was simply a tool, and not one that saved time. To do the things that they did requires hundreds of hours of work, and entirely new skills had to be learned. The computer isn't a replacement for an animator's talent, it simply provides him with a new way to express it.

THE QUEST FOR REALITY

Back to the real world, and the 3D effects in Seaquest have been wowing Sunday night television viewers. What perhaps they didn't know is that all the special effects, including the submarines, the Hyper Reality Probe, WISKAS and all other undersea objects are actual 3D models created on the Amiga using the Video Toaster and Lightwave 3D software.

The Video Toaster is a graphics and effects engine designed for the NTSC television system. It comes in a number of configurations but basically its a big box Amiga (A2000, 3000 or 4000) with Newtek's proprietory hardware inside. The Toaster is supplied with a variety of tools to perform effects such as Picture in Picture, multi-source mixing, titling and much more. However, it's a rendering engine that the program is becoming best known for in Europe. The reason for this is that the NTSC television standard is of notoriously poor quality and would not really be acceptible for display on the European PAL standard. Unfortunately the Toasters operation is totally integrated into this poorer display standard. To create a PAL version of the hardware would require a total redesign that Newtek are not prepared to perform.

LEARNING HOW TO DO IT

Of course, it's one thing to know that all these great effects are possible, but another thing entirely to create them for yourself. Now thanks to well written programs such as *Deluxe Paint, Brilliance, Imagine, Real 3D* and a host of others, it's very easy to learn the basics.

Mind you it's rather like owning a camcorder and wanting to get into film production. You can quickly start experimenting with limited effects and you'll doubtless have a lot of fun. Given many years of practice you might even conceivably become good enough to make your own films. However, with more powerful equipment and proper tuition you can accelerate that learning process massively.

There's never really been a clear career path for people wanting to get into this kind of work. A good standard of art, or excellent design skills are obviously helpful, as are a knowledge of computers and the kind of software available for them.

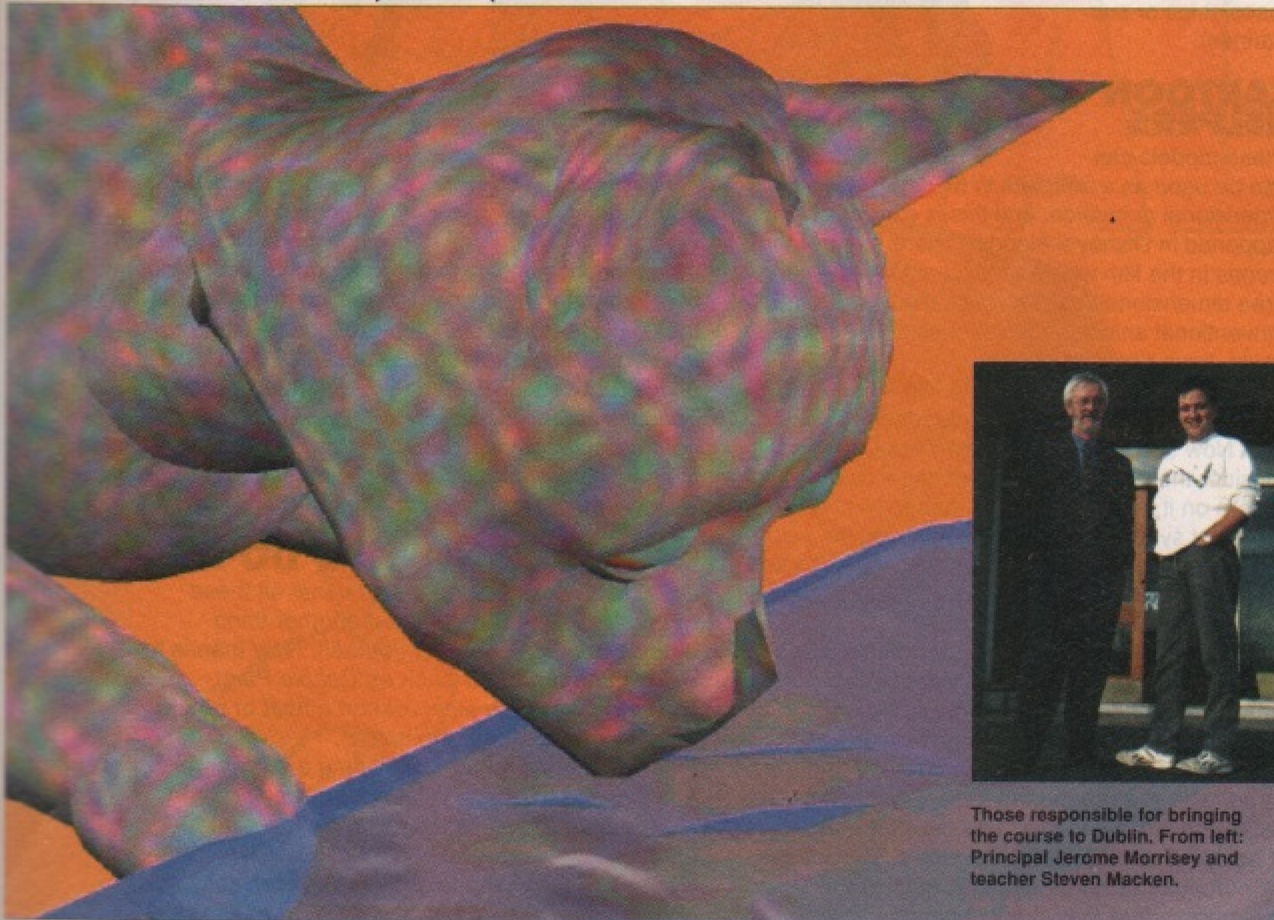
Now at last, a dedicated college of animation offers courses in all the disciplines required to become a successful computer animator. Tony Dillon went to Dublin to check the college out and you can read about his experiences on page 30. CU



BACK TO THE DRAWING BOARD

GRAPHICS AND ANIMATION SPECIAL

Amiga animation has come on in leaps and bounds over the last few years. So much so, in fact, it's now possible to take a diploma in computer animation and graphics using you humble Amiga and a little bit of talent. Tony Dillon draws some conclusions.



Those responsible for bringing the course to Dublin. From left: Principal Jerome Morrisey and teacher Steven Macken.

A frame from one of the glorious animations produced on the course.

We've known all along how good the Amiga is at doing animated graphics. We've all seen what Tobias Richter and Eric Schwartz can do with a simple piece of software and a little time. Finally, after what seems like an eternity, the world of animation is starting to wake up to the fact that the Amiga is an excellent animation workstation. Names like Bluth and Disney may seem a little big for the average Amiga animator, but already both companies are hiring animators trained in using A3000s and A4000s. But where does an animator go to get noticed? Fairs? User groups? No, the Senior College in Ballyfermot.

Unless you work in professional animation circles, you probably won't have heard of the College. Hidden away in a Dublin suburb, the Arts block of the Senior College is *The Place To Be* for animation. Looking at some of the images across these pages (and note: none of these have been created by graduates. They are all images created by students working their way through the course), is it any wonder that Don Bluth himself forms part of the examination board?

But before we dive in headfirst, a little history.

The college itself was officially opened in 1981 as 'an exciting and challenging venture in Irish Education'. One of the original aims of the college was to provide training to meet the needs of business, industry, social services and the newer areas like radio, television, animation, computing and electronics. Four years ago the animation and computer courses met in an explosive and exciting way and, with a little encouragement from Sheridan College, Toronto, the Diploma in Computer Animation and Graphics was born.

TWO HEADS ARE BETTER THAN ONE...

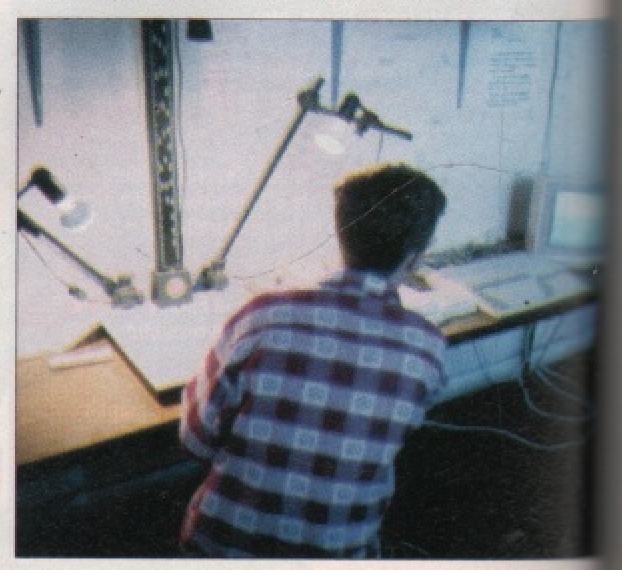
Two of the minds behind the course are Principal Jerome Morrisey and teacher Steve Macken, and it was these two genial gentlemen who proudly took me through the college while explaining how the course works. Essentially, you start with a three year course in classical animation – the real McCoy – where students learn how to create the illusion of movement convincingly, the best shots and direction techniques, character animation, body movements – in short, the basic skills any animator would need.

An actual course in animation seems like such an obvious idea; you wonder why more colleges haven't jumped on the bandwagon. For example, the Disney-owned Sheridan College, formed in 1970, is now regarded as the leading animation educational institute. Essentially, if you get a pass from Sheridan, then youarealready half way to a very successful career in animation. They introduced a computer animation course in 1982, and now Senior College have taken that same course, modified it to their own needs and are now running an extremely successful diploma. The standards are high, naturally, especially when you consider the fact that many students are actually being taken on by Disney and Bluth before they even finish the third year of the course!

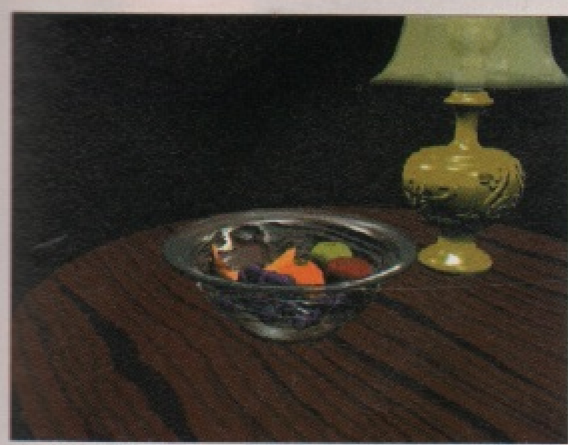
After the three years of classical animation, by which time the students are more than capable of producing extremely professional results, they can opt to start computer animation. This way, the students can learn every aspect of animation and then apply it to the digital medium. As Steve Macken explains: 'You have to know the rules before you can break them. In classical animation, everything is curves and arcs. In computer animation, everything is straight lines.' By teaching the students to work in arcs, and then applying that to something like *Imagine*, you move into real photo-realistic animation. Believe me when I tell you that the screenshots on these pages do the animations themselves no justice at all. When this lot get into the software industry, there are a lot of people who are going to lose their jobs.

FRUIT LOOPS

Interestingly enough, the first thing the students have to do when they start creating graphics on the Amiga is a bowl of fruit! For those who have



A mounted video camera and a frame grabber is used to check animations.



The first part of the course is still life rendering. This one is from Philip Dunne.



This is by Andrew Phelan, who wins the award for the most photorealistic image. The watch alone is a 4 Meg image!



Not every draws on real life, as this futuristic battle scene from Scott Kelly shows.

never done an art course, the first bit of still life you ever do is a bowl of fruit to show your understanding of scale, light and texture. Students sit down with *Imagine 2* and create the most photorealistic apples and oranges they can, but with the one restriction that they are not allowed to use any of the in-built textures. As you can see from the pictures on this page, it makes for some very different fruitbowls!

This might seem a bit of a grandiose statement, but you really have to see some of the animations that haven't made the grade to understand the levels attained. One student, drew and animated a Queen concert. Although similar to the original video, the art is stylised and simplified, and shows excellent use of timing and synchronising. However, it didn't pass as the judges claimed it was too close to the original, and couldn't really be graded as classical animation. This isn't a sob story, by the way. Although the student in question didn't gain his degree, he still went to work for Bluth Ireland. Obviously what's good enough for the general public isn't good enough for the Senior College Ballyfermot.

But what does this really have to do with the Amiga world, you might well ask. How does a quarter of a million spent on Amiga hardware and software sound to you? The course started small a couple of years ago with a handful of A500s, but since then the network has grown to include six A4000s, four A3000 Towers and 14 A3000s! Every machine has at least 18 Mb of RAM, a 250 Mb hard drive, a 24-bit graphic board and all are connected to a Beta SP high grade video recorder. They chose the Amigas simply because there was nothing to compare to *Deluxe Paint VI AGA* or *Imagine 2* on the PC. Sure, there are rendering packages a plenty across the PC, but power per pound, the Amiga makes the best sense. Of course, Jerome would love to have a few Silicon Graphic workstations dotted about the place, but cost is always the restrictive bone of contention.

QUIETLY CONFIDENT

Jerome Morrisey is very upbeat about the course, and very excited. Anyone who has ever spoken to a teacher or head teacher about a course will know how excited they can get, but to me that excitement always seems false. With Jerome, though, it is most definitely genuine. He had an idea, and it's now working beautifully in practice. There is still plenty of room for expansion as there always will be, but the people alongside him such as Steve Macken, Andrew Phelan, Philip Dunne, Jason McDonald, Caroline Peels and everyone else on the course, are participating in a revolution, and the Senior College is the place that will be known for taking computer animation into the next century. CU

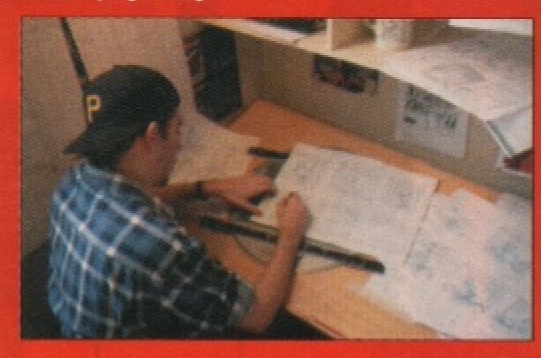


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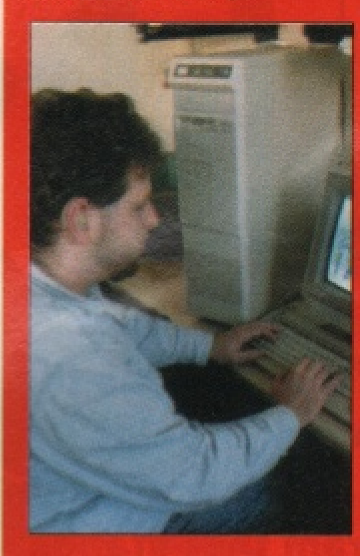
FOUR YEARS IN THE LIFE OF AN ANIMATION STUDENT



The factory floor, as you will. This is a batch of first year students, learning the basics of animation. At the moment they are learning how to create a realistic wave movement. Pictures are drawn on animation sheets, and then scanned into a Amiga and played back. This way, the students can instantly see exactly how their animations are progressing.



In the third year, when the students are working on their final animated project, they are given their own animation booth - brought over from Sheridan College at great expense - to work in. Here they have everything they need, while working in an environment that mimics the working environment completely.



The computer animation course gets them to take everything they know and apply it to the digital medium. One of the hardest adjustments to make is the move from working with curves to something that forces you to work with straight lines, but as you can see, the students don't seem to be having any major problems with it.



BATTLE OF THE TITANS

GRAPHICS AND ANIMATION SPECIAL

For years *Deluxe Paint* has ruled the roost as the Amiga's premier paint package. *Brilliance* is the first program that stands a real chance of stealing its thunder.

In the Amiga's earliest days, the only paint package was a hideous piece of software called *Graphic Craft*. It was a clunky old thing that didn't even have a tool for drawing circles. In late 1985 *Deluxe Paint* was released and met with a rapturous reception winning awards across the world. A standard was set for art packages which, while frequently contested, was never bested. Some of the worthier opponents over the years included *Photon Paint*, *Spectracolour* and *Digipaint*. It's interesting to see that all the worthwhile competition came in the form of HAM-only programs. This was one of the areas of weakness in the earlier versions of *DPaint*, and in fact it wasn't until version 4 that Electronic Arts thought to include support for this quirky screen mode.

HAM mode is a special Amiga screen mode that lets you use up to 4096 colours at once on a normal Amiga, or 256,000 on an AGA machine. The thing about this mode is that it's quirky to program for, and most people don't use it except when handling digitised pictures. Games never use this mode because the screen updates are so slow and results can be extremely unpredictable. This makes it useless for arcade games. Another undesirable side effect of this screen mode is that picture files are rather large, and this makes them impractical for inclusion in adventure-style games.

TAKE IT FROM THE TOP

Deluxe Paint was designed by an American called Dan Silva. It was originally written as a programmer's tool, hence the fact that it has no support for HAM mode. It was never originally intended to be used as an art package. It was for designing game graphics and nothing else.

As the program's popularity became evident, it was bundled with the Amiga, and in fact there's almost never been a time when it was not included with the machine in Britain.

Responding to increasing pressure from their users, Electronic Arts included animation with version 3, but held off till the next release to add HAM mode support.

Version 4.0 offered support for HAM-6 mode, which is the type of HAM used on the pre-AGA Amigas. Unfortunately this was almost immediately made obsolete by the release of the A1200 and A4000. However, Electronic Arts were very quick to respond and, in next to no time, *DPaint AGA* appeared with full support of HAM-8 as well as HAM-6 and all the non-HAM screen modes (including extra-halfbrite).

Unfortunately, although the new machines offer accelerated processing, the HAM-8 mode is so processor intensive that it's all but unusable unless you have a 68030 or »




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» 68040 based Amiga.

So now the stage had been set. Despite restrictions, *Deluxe Paint* had thus far resisted all challengers and the AGA version set the standard that all other programs had to reach.

AND THE CHALLENGER IS....

Digital Creations meanwhile had been doing their own thing as far as Amiga graphics were concerned. In the days before AGA, they released a board called DCTV which could handle several million colours on-screen at once, and was ideal for animation. They started developing what they hoped would be the ultimate Amiga graphics program. With a programming team that collectively have more experience with Amiga graphics programs than anyone else, it comes as no surprise that their sights are set so high.

After a considerable amount of pre-release hype and speculation *Brilliance* finally hit the streets in the third quarter of 1993.

AND SO THE BATTLE BEGINS....

The first important difference between the programs is evident before you even load them. No, I'm not talking about the box design (although *Brilliance's* box is cheap by comparison to *DPaint's*), I'm talking about the fact that *DeluxePaint* is a single program which incorporates a HAM and non-HAM engine. Load that program and you can switch freely between the screen modes without having to reload the program each time. *Brilliance,* on the other hand, is two separate programs: *True Brilliance,* a true colour program for manipulating HAM and 24-bit images; and *Brilliance*, a register-based program which deals with all other screen modes.

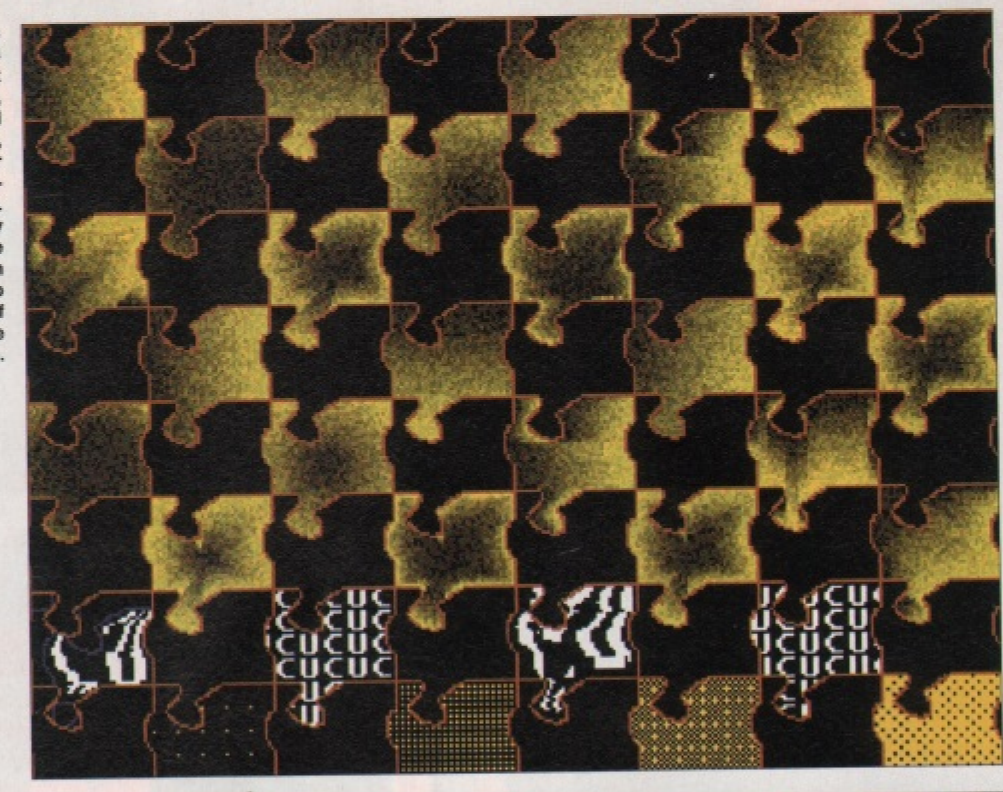
FEARSOME TWOSOME

The reasoning behind having two separate programs is that the requirements of a HAM art package are very different to those of a non-HAM one. To a certain extent Digital Creations have overcome this by forcing their program to use full 15 or 24-bit colour registers internally, before converting the data for output to the existing screen. Nevertheless, because of the vast palette available even to a HAM-6 image, let alone a HAM-8 or 24-bit one, functions such as the stencil have to work in different ways.

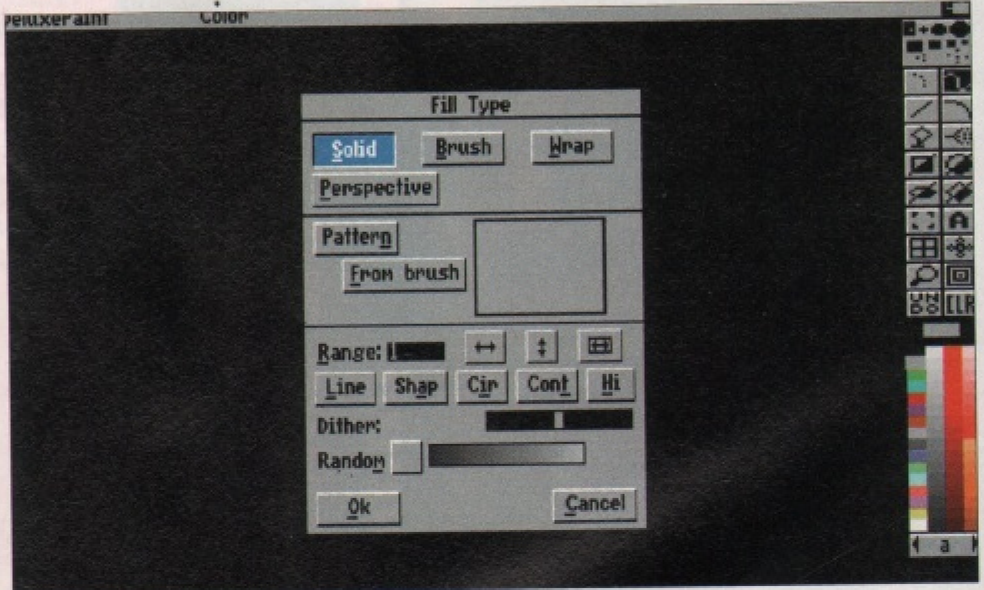
Deluxe Paint deals with this problem by implementing different parts of code according to the screen mode. But, to be fair, this solution is a long way short of the optimum.

Nevertheless, I have to say that I prefer not to have to decide what screen mode I'll work in before I load the software.

Another important difference between the programs is the matter of copy protection. Whilst *DPaint* uses a serial number which uniquely identifies each copy of the program, but which is extremely easy to copy, *Brilliance* uses a serial number and a dongle. The dongle must be plugged into the joystick port before the program will run. I strongly dislike this form of protection, which, in any case, is not enough to deter the professional pirates and the boot-sale merchants. It wouldn't be so bad if the dongle had a through port so it could be left plugged in permanently, but as it is, you have to unplug it each time you need the joystick port (perhaps for another dongle). I currently have eight programs that use dongles and they drive me mad – except *Scala* which does have a through port.



Deluxe Paint is full of useful tools that may at first seems pointless, but when used with imagination, can bring your pictures and animations to life. One of the many variations on the symetry function can be used to create the kind of jigsaw puzzle effect seen here.



Even the fill option in *Deluxe Paint* has a whole panel of dedicated options. Graduated textures and mock-3D effects aren't a problem, especially when you've set up a suitable palette with a good graduation of colours from one end of the scale to the other.



JARGON BUSTERS

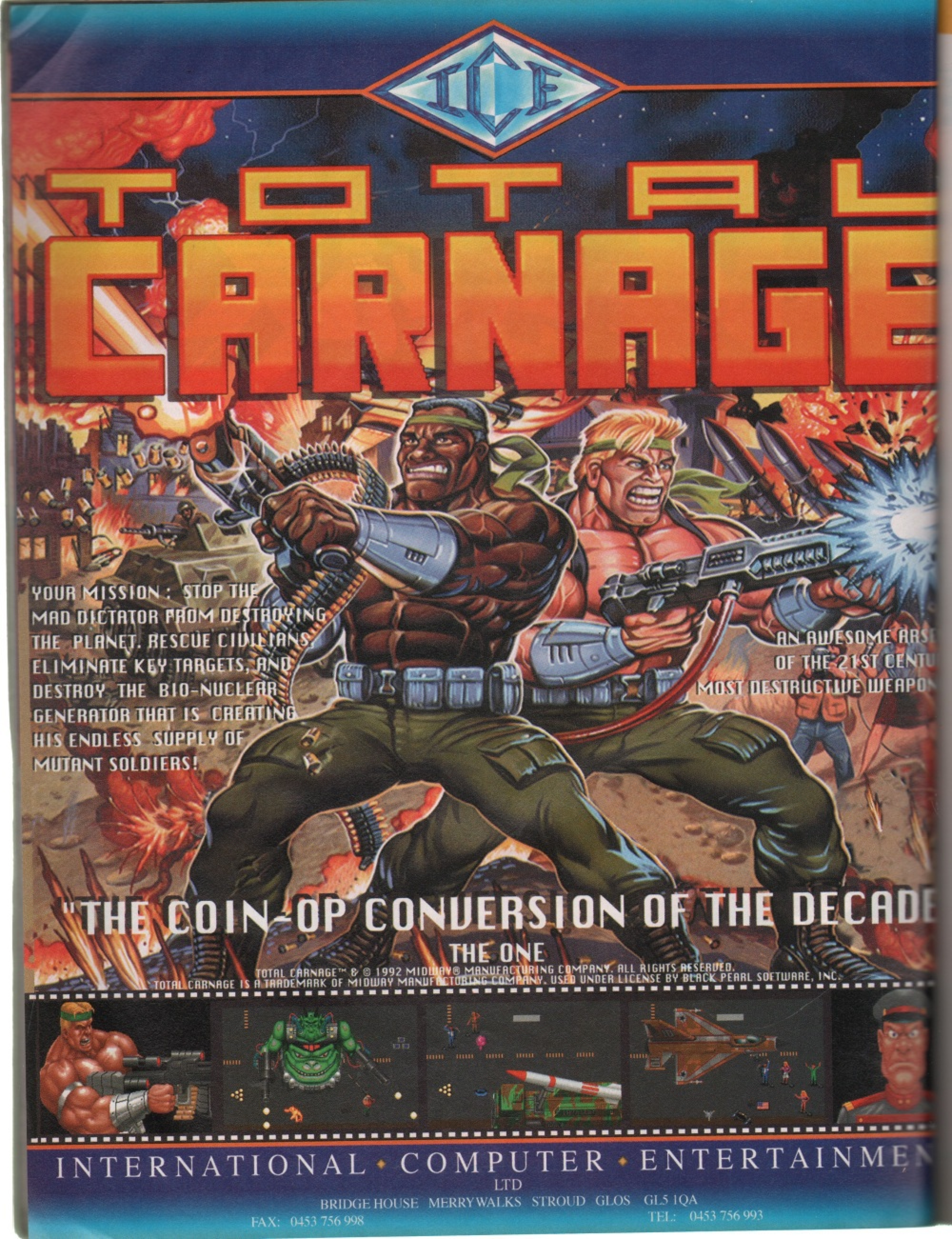
- 5-bit, 8-bit, 15-bit, and 24-bit – Each on-screen pixel is stored in the computer's memory as a number of bits. The more bits, the more colours, up to a maximum of 24 which gives a palette of 16.
- 7 million colours – More than the human eye can detect!
- Bit – The smallest amount of computer memory or disk storage space.
- AGA – Advanced Graphics Architecture. The generic term which describes the new high powered graphics modes found in the A1200, A4000 and CD32
- HAM – Hold and Modify. A quirky graphics mode which uses a kind of trickery to increase the number of on-screen colours. Ordinary Amigas use HAM-6 to give up to 4096 colours on the screen at once, whilst AGA machines use HAM-8 to give up 256,000.
- Processor – The chip in the Amiga which does most of the work.
- Tool Box – An on-screen box containing icons representing different functions. Designed to save you having to access menus or use the keyboard.

MANUAL OPERATIONS

Perhaps the single most important feature of any semi-complicated program is the quality of its manual, and this is one area where *Brilliance* falls short of the high standards set by *DPaint. DPaint* guides the user carefully through every conceivable aspect of the program's operation, leaving nothing to chance hoping that you'll be able to work out the gaps. There are copious tutorials and lots of accompanying material on disk. There is also a significant reference section that will aid you as you move from a beginner to a demanding graphics user.

By contrast the *Brilliance* manual seems to have been written by someone who got bored with the job half way through. Of course, the grammar is fine, and initially at least, the tutorials are easy to understand. Then suddenly the manual switches from guide-you-by-the-hand mode to assume-you-wrote-the-damned-program mode, often omitting information that is essential. The index is little better, as you'll discover if you try to look up Perspective for instance. You'll find a single entry directing you to the section on tweening. Admittedly this is the right general area to be in, but finding the information you need is far from simple.

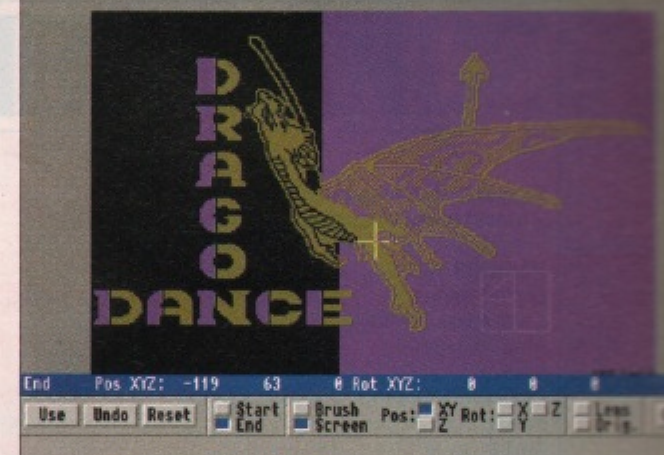

BUBBA 'N' STIX
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Screen shots taken from Amiga version
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Both *Brilliance* and *Deluxe Paint* offer animation facilities, with much the same features available in both, although *Brilliance* sometimes presents them in a more user-friendly way.



» Anyway, time to load the programs. *DPaint* always interrupts the loading sequence to give you registration information and ask for your preferred screen mode. *Brilliance,* on the other hand, just jumps straight into the program.

Brilliance bears more than a passing resemblance to *Photon Paint* with its horizontal tool box and it's not-quite *Workbench 2.0* colour scheme. *DPaint,* of course, has its toolbox running down the right of the screen. The upshot of this seemingly superficial difference in positioning is that *Brilliance* manages to get an impressive 31 tools on the screen at once, whereas *DPaint* only manages 20. It also means that more of the screen is occupied by menus, but strangely enough this doesn't seem intrusive. That's just as well because the difference in Digital Creations' approach is far more fundamental than simply repositioning the tool bar.

After extensive consultations with some of the world's best known artists, they decided that the ultimate art package didn't need drop-down menus at all. In fact, as much as possible, all selection is done via icons, with text being restricted to the essentials. Whilst this approach works extremely well with the drawing tools, I feel much more comfortable selecting important functions like load and save from a proper menu rather than choosing from icons which I could conceivably mistake in a hurry.

THE SAME... BUT DIFFERENT

At first it looks as if *Brilliance* has more or less the same drawing tools as *Deluxe Paint.* This is inevitable because no matter how sophisticated the new features, all art packages need some fundamental drawing tools such as freehand, lines, circles etc. It's to Digital Creations' credit that they even managed to make some small but significant changes to these basic tools, because it illustrates the attention to detail that their design team must have shown.

For example, there's an arc tool for creating curves, but the tool also doubles up to give you a Bezier option for creating complex curves (those which either exceed 360° or which change direction within the curve). The circle tool has gone, and this option is now combined with the ellipse tool. To create a circle simply press the Caps Lock key whilst drawing an ellipse. Release it and the shape becomes a circle. *Brilliance* also lets you rotate ellipses once they're drawn; a feature which was absent from *DPaint* .

On the subject of ellipses (and rectangles too for that matter), *Brilliance* offers you a choice of drawing methods for these shapes, and each is useful in different circumstances. The two choices are corner to corner, or centre to corner.

The airbrush tool in *Brilliance* has also received the treatment, and now has two extra parameters which can be used to make it behave much more like a real air brush. The first of these is the flow rate. In *DPaint* the flow is constant, and only changes relative to the area being covered.

For instance, if you are covering an area two inches across, the flow will be slow, whereas when spraying an area a quarter of an inch the rate of flow is much faster. Added to that, *Brilliance* lets you adjust the focus of the spray, defining whether or not pixels »

Left: Here's a picture variously processed in *Brilliance.* The many different effects make *Brilliance* a good choice for retouching high definition 256 colour, HAM-8 or 24-bit images.

Below: *Deluxe Paint* doesn't have so many image-altering processes, and neither can it work on true 24-bit images, but it gets by well with its limited selection.



FILE FORMATS

One important factor distinguishes *Brilliance* from *DPaint,* and that's its ability to work with 24-bit images. Now, of course, these can't be displayed on the screen in all their glory, but on an AGA machine in HAM-8 mode, the loss of colour resolution is all but invisible. This makes it ideal for retouching 24-bit images.

The program can also load and save 15-bit pictures, as well as the other indigenous Amiga image formats.

Deluxe Paint 4 AGA makes an effort, and can at least load 24-bit images, even if it can't save them.

FEATURES COMPARISON TABLE

	DPAINT	BRILLIANCE
Supports all Amiga screen modes	y	y (2 programs)
# of tool icons on screen	20	31
DRAWING TOOLS		
Dotted freehand	y	y
Continuous freehand	y	y
Filled freehand	y	y
Line	y	y
Continuous line/filled continuous line	y	y
Curve	y	y
Bezier curve	n	y
Rectangle/filled rectangle	y	y
Adjustable origin	n	y
Circle/filled circle	y	y (in ellipse tool)
Ellipse/filled ellipse	y	y
Adjustable origin	n	y
Aspect can be rotated	n	y
Cut rectangular brush	y	y
Extended crosshairs whilst cutting	n	y
Cut freehand brush	y (only as a polygon)	y
Freehand brush stored as:	Rectangle	Ragged shape
Grid	y	y
Symmetry		
Cyclic	y	n
Mirror	y	y
Tile	y	n
Number of Magnification levels	23	31
Grid	n	y
FILL TYPES		
Solid	y	y
Brush	y	y
Tile fill	y	y
Stretch	n	y
Shape/wrap	y	y
Perspective	y	y
DITHER FILLS		
Ordered dither	n	y
Ink & Background	n	y
Ink and Paper	n	y
Linear	y	y
Shape	y	y
Circular	y	y
Radial	n	y
Highlight	y	y
Horizontal	y	y
Horizontal shape	y	y
Vertical	y	y
Conform	n	y
AIRBRUSH		
Resizable	y	y
Adjustable rate of flow	n	y
Adjustable focus	n	y
Random colour spray	n	y
TEXT		
Change fonts directory	y	n
Bitmapped fonts	y	y
Compugraphic (scalable) fonts	y	y
Justification	n	n
Styling	Basic	Basic
Colour fonts	Y	y
Kerning	n	y
Type directly onto screen	y	n
Type into a buffer	n	y
Number of undos	1	Limited only by memory
Number of redos	1	Limited only by memory
BRUSH HANDLING		
Number of brushes	2	9
Resize	y	y
Freehand stretch	y	y
Halve	y (both axes only)	y (either axis)
Double	y (either axis)	y (either axis)
Flip	y (either axis)	y (either axis)
Edge/Trim	y	y
Outline	y	y
Rotate 90 degrees	y	y

LBETWEEN DPAINT AND BRILLIANCE

Any angle freehand	y	y
Any angle (in degrees)	n	y
Shear	y (either axis)	y (either axis)
Bend	y (either axis)	y (either axis)
Handle		
any corner	y	y
center	y	y
place	y	y
DRAWING MODES		
Matte (Dpaint) Color (Brilliance)	y	y
Colour (DPaint) Brush (Brilliance)	y	y
Replace	y	y
Smear	y	y
Average Smear	n	y
Shade (DPaint) Range (Brilliance)	y	y
Blen	y	n
Cycle	y	y
Smooth	y	y
Mix	y	y
HBrite	y	y
Colorize	Y (Hue in process menu)	y
Brighten	n	y
Darken	n	y
Tint	y (in process menu)	y
Negative	n	y
Not	n	y
Value	y	n
Anti Alias	y (3 levels)	y (4 levels)
Opacity	Y (Translucency)	Y (Transparency)
ANIMATION		
Anim brushes	y	y
Pick up	y	y
Brush morphing	y	y
Full screen	y	y
Video style panel	y	y
AUTO CONTROLS		
Movement in 3 axes	y	y
Rotation in 3 axes	y	y
Opacity	n	y
Decay	n	y
Trails	y	y
Cyclic motion	y	y
Ease in/out	y (all axes at once)	y (user defined axes)
Seperate Ease for rotation and position	n	Y
Define key frames manuall	n	y
Animated fills	n	y
Preview	y	y
Quick frame search	n	y
Light table (onion skin)	y	n
COLOUR		
Number of ranges	8	8
Hard edges	n	y
User definable # of steps between range colours	n	y
Random dither	y	y
Variable dither	y	y
Cycle rate	64 speeds	71 speeds
GRADUATIONS		
Virtual palette for cycling	y	y
PALETTE		
Flexibility	Adequate	Excellent
Colour models	rgb, hsv	rgb, cmy, hsv
Virtual palette when mixing colours	y	y
Palette resolution	24-bit on AGA machines 5-bit on non-AGA machines	5©bit (Brilliance) 15© or 24©bit (True Brilliance)
STENCIL TYPES		
Register based on non-HAM	y	y
Tolerance based on HAM	y	y
Freehand draw a frisket (stencil)	n	y
Background fix	y	y
Perspective	y	y (in animation menu!)
Graphics pad support	y	n
Number of spare screens	1	Limited only be memory
Printing	Adequate	Very Poor
Calculation speed (for brush resizing and other colouring operations)	V. Slow	V. Fast
Operating speed in HAM	Unbearably slow	Moderate
Interface design	85%	86%
Intuitiveness	87%	84%
OVERALL SCORE	89%	90%

»



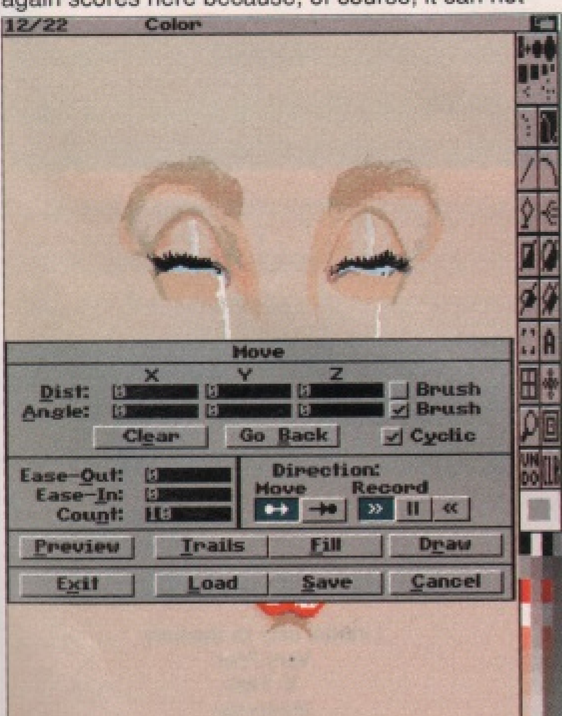
» will appear evenly over the entire area of the spray or will be concentrated in the centre. It's also nice to see that *Brilliance* provides you with a frame to show exactly where the spray will appear.

THE DOWNSIDE

The text tool is one weakness that both programs share, although each of them handle text badly in their own unique way! Neither of them support any form of justification, and only the simplest form of styling (bold, italics and underline) can be applied to the text. Both programs can handle bitmapped, scalable and colour fonts. *Brilliance* even supports a rather bizarrely implemented form of manual kerning to make certain letter pairs look more natural together. When using *DPaint*, text is typed directly onto the screen, and to move it you need to pick it up as a brush. *Brilliance*, on the other hand, lets you enter text into a string which then automatically becomes a brush ready to be positioned. The disadvantage of this system is that you need to reselect the text gadget for each new line of text because you can only enter a single line at a time.

When it comes to brush handling *Brilliance* is far more flexible, both in terms of the way that brushes are picked up, and the way that they can be stored and manipulated. For example, *DPaint*'s freehand cut mode is actually a polygon cut. A shape is defined using a series of connected lines which must link to form an enclosed shape. Closing the shape can be a game on its own sometimes! *Brilliance* offers you a true freehand cut called Carve. Wherever you move the scalpel a line will appear. When you close the shape the brush is lifted. Better yet, the brush will only encompass the area you cut, unlike *DPaint* which encloses the brush in a rectangle.

Once the brush has been cut, there are a vast number of operations that can be performed upon it. In this regard *DPaint* was always a bit of a ground breaker, providing options to rotate and slew, bend and resize your brush. Unfortunately, it handles memory very badly so trying to perform these operations upon a full screen brush is usually impossible. Even when it is possible, it's often so slow that it's all but unusable. *Brilliance* yet again scores here because, of course, it can not only handle full screen brushes, it can perform brush manipulations faster and with more flexibility.



The Move requestor is the key to some of *Deluxe Paint*'s most powerful animation and "tweening" features.



Perspective is one of *Deluxe Paint*'s strongest features. Any two-dimensional design can be used as a 3D texture, and used to create scenes such as this.

DRAW MODE VARIETY

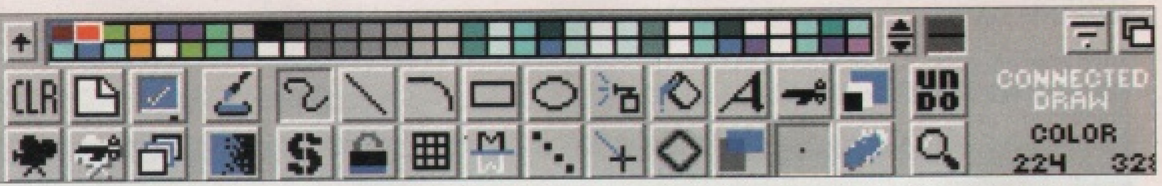
Another area that *DPaint* pioneered and which both programs still score very highly on is the range of drawing modes that they offer. These can be used to alter the way that 'ink' is laid on the screen, and are particularly useful to those who are either very creative or who have artistic training.

Here again, *Brilliance* wins out, but only just thanks to its Negative, Not, Lighten and Average Smear options.

When it comes to animation, *Brilliance* quite simply stomps on the opposition, although yet again *DPaint* gamely rallies and manages to provide a few very important features not offered by its rival.

For instance, it supports a feature that they call Light Table. To a professional animator it's better known as onion skinning and it's a way of looking at dim versions of previous frames in a sequence in order to check that the design and movement of the current frame is correct. For animators who have learnt their craft the traditional way, this is an invaluable feature, and one that *Brilliance* seems strangely to have omitted.

By way of compensation though, it does provide a vastly more powerful tweening section. Tweening is the process of defining the start and end of a movement and allowing the computer to





The horizontal control panel of *Brilliance* is prefered by some, although it makes little difference to the operation of the program.

BRILLIANCE £149.95

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
A1500 ✓ A2000 ✓ A3000 ✓ A4000 ✓

An Amiga with Workbench 2.04 or higher and at least 2Mb RAM. A hard drive and 2 floppies also required.
MERIDIAN DISTRIBUTION, EAST HOUSE, EAST ROAD INDUSTRIAL ESTATE, LONDON SW19 1AH, TEL: 081 543 3500.

EASE OF USE 90%
It's a bit hard to learn at first, but plain sailing once you do.

VALUE FOR MONEY 90%
The RRP is very high, but can be bought elsewhere for half that if you look around.

EFFECTIVENESS 99%
I can't really fault the end results.

FLEXIBILITY 97%
Beats the high standards set by DPaint at almost every turn.

INNOVATION 89%
Builds well upon the foundations laid by DPaint.

"The only Amiga graphics package that can take DPaint on and win."

OVERALL 91%

DPAINT £99.99

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
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An Amiga with Workbench 2.04 or higher and at least 2Mb RAM. A hard drive and 2 floppies also required.
ELECTRONIC ARTS, 30 HERON DRIVE, LANGLEY, BERKSHIRE SL3 8XP. TEL: 0753 549442.

EASE OF USE 88%
Like most worthwhile programs it'll take awhile to learn, but very powerful once you do.

VALUE FOR MONEY 90%
Compared to all other programs of its stature – a barg.

EFFECTIVENESS 79%
Very powerful but awfully slow and a bit dated now.

FLEXIBILITY 89%
Brilliance has demonstrated how good things can get but DPaint can still turn a few special tricks.

INNOVATION 92%
Very innovative when new, not so much now.

"A great program that still has a great deal to commend it, not least the price."

OVERALL 89%

THE BATTLE HAS JUST BEGUN...


Lee Taran who is working on *DPaint V*

You can't have failed to notice that *Brilliance* seems to fare considerably better than *Deluxe Paint* in this review and deservedly so. It would not be an unreasonable thing to ask whether or not the package which has dominated the Amiga market for so many years is finally going to rest in peace.

The answer to that must surely be a resounding hell no! There are two reasons why *Deluxe Paint* looks likely to stay in the game for the foreseeable future. Firstly it is bundled free with hundreds of thousands of Amigas worldwide every year. This means that there are a similar number of recruits to the program, all of whose first taste of an Amiga graphics package is *DPaint*.

The other important thing to consider is Electronic Arts' record in this arena. They're definitely not ones to lie still and take a battering, and, historically speaking, competition has always made them bounce back with an even stronger product. Even before *Brilliance* hit the streets Electronic Arts had begun the detailed consultations necessary to design the new program. Now with the benefit of seeing what makes *Brilliance* so good, it's safe to say that *Deluxe Paint 5* will really be something to shout about.

work out the intervening frames. Both programs are quite strong in this are, *Deluxe Paint* with its Move requester and *Brilliance* with its tweening tool.

In *DPaint* you specify a start point by stamping a brush onto the screen. You then define the end point as a position relative to the start point. You can also define any rotations that you want the brush to perform in transit.

Brilliance takes a slightly different, but far more logical approach. Again you define the start point of the brush (although this time you do so by entering an x, y, z coordinate). You must also enter the end point in the same way. The end co-ordinates can either represent an absolute position or a relative one.

Where the program really scores is its Adjust option which lets you define the start and end points by dragging the brush into position. You can position it in all three axes as well as defining any rotations it is to perform.

As if that weren't enough you can now adjust the opacity (transparency) of a brush as it moves, which makes the program ideal for video titling where fade in and outs are needed. This option is particularly useful when performed on an AGA image.

LIFE IN THE OLD GIRL YET

One of the more frequently used options of any paint package is its fill modes. *Deluxe Paint* scores very highly in this regard, offering 13 different types of fill type ranging from perspective and pattern fills, to every conceivable type of dithered fill. *Brilliance* only appears to offer 10 different fill types, until you notice that there are two additional options (Conform and Centre) which can alter the way that all of the other fills work, increasing the total number of effects from 10 to 40.

In addition to that, there's also an Ordered Fill mode (which *DPaint* lacks) that works by filling with a pattern of ink coloured pixels, combining them with either the background ink or the paper colour. This fill mode is particularly useful when you're working in a high resolution or with a limited palette.

CONCLUSION

Deluxe Paint 4 is undeniably a very powerful and flexible program that rightly deserves its place of honour near the top of the pile. It seems to me that in creating *Brilliance* Digital Creations must have looked at every tiny feature that made *DPaint* so good, and thought to themselves: 'How can we improve upon that?'. If they came up with an answer, it was implemented, if not, things were left well enough alone. Ninety-nine per cent of the time Digital Creations came with improvements that make a difference.

The only absolutely essential thing that they could neither improve upon nor duplicate was the sense of familiarity and friendliness that *DPaint* offered its users. In fact, to a certain extent, *DPaint* itself had lost some of that 'homely' feel when it was upgraded from version 3 to version 4, and many users still feel that version 3 was the best Electronic Arts ever developed.

In terms of design and sheer specifications Digital Creations really seem to have done everything right. Sure I use it all the time. After all, it can do things that no other program can. Still, I also like to use *DPaint* where possible. Try it out and see what you think.... CU



Look ahead. Look far, far ahead to the year 3200 and imagine a basic space craft as your only worthwhile possession. If you are to fulfil your burning ambition to be the best, you must defeat the best by coupling your inherited flying skills with a vast knowledge of the Universe. Outwit the pirates by beating them at their own game.

Be merciless, be wise, beware.


PC Screen shot


AMIGA Sc

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1985 – ELITE

"Elite. Game? It's a way of life!"
Personal Computer World magazine

only the very bes

Available on PC


GA S hot


PC Screen shot

Intergalactic trading has its rewards and its downfalls. Trade with the international stock markets and play one against the other to get the best deal. Watch your back at all times. Adding to your bank balance could well be adding to your criminal record! The Feds may or may not like what you do. Tough! They will have to catch you first. In a galaxy full of challenges, –

this Frontier has no limits.

AVID
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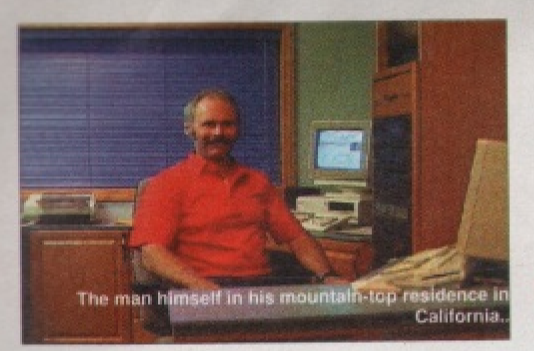
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CU Amiga – 97%

stmature with time

PC AMIGA, ATARI ST

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The man himself in his mountain-top residence in California..

INTERVIEW WITH JIM SACHS

GRAPHICS AND ANIMATION SPECIAL

Jim Sachs is widely acclaimed as one of the Amiga's most popular artists, and a mover in powerful circles. He took time out of his busy schedule to speak to Mat Broomfield.

Jim Sachs left college in 1977 and went straight into the airforce. After serving six years as a C141 pilot, he founded a company called Sachs Enterprises. He takes up the story from there.

Jim: I was freshly out of the airforce and looking for something to build a career on. I was always interested in art, graphics, technology and things like that. Suddenly everyone was getting into computers. So I went out and got a Commodore 64 to try to learn what I was missing.

Within a month I found that I had a flair for it and was writing machine language programs. I found that it had the ability to show much more realistic graphics than most other platforms, so I thought that was a good niche for me to try to fill. I started doing graphics on graph paper and transposing them into the computer in hexadecimal arithmetic because there were no art programs or anything at that point.

I created a scene of downtown Washington DC and it turned out so well that my wife suggested making it into a game. So I added some flying saucers and that formed the basis for my first game on the Commodore 64 called *Saucer Attack*.

Mat: Is that game the inspiration for your saucer demo on the CD32?

Jim: Yes, it is.

Mat: So you started out writing games for the C64. Did you write any more games for that computer?

Jim: I marketed that one out of my house. Piracy at that time was just terrible on the Commodore 64. I was about half way through another project called *Time Crystal* when I heard that the Amiga was coming out. I decided to switch, which was a very hard decision because I'd spent about a year and a half, almost two years on *Time Crystals*.

So, basically, I took everything I'd done on the 64 and bought a ticket to West Chester, Pennsylvania. I went to Commodore unannounced and I talked to Paul Goheen who was the head of Commodore software at that time. So I just went into his office and showed him what I could do on the Commodore 64 and asked if I could be a developer on the Amiga which wasn't actually out yet at that point. He agreed and within a month I was working for them.

Mat: And you really hadn't had any contact with them prior to that point?

Jim: Absolutely. Although they were familiar with *Saucer Attack* and were considering talking to me about publishing it under their label.

Mat: So you mentioned that you were interested in graphics and obviously that's your trademark. Do you have any formal training either in art or graphic design?

Jim: No. None at all.

Mat: So it was just something that you did as a hobby?

Jim: Yes. I've always done quite a bit of it. But as far as formal training goes, when I was in college all of the art training seemed to be moving towards modern art and things that I wasn't interested in at all. I was interested in highly detailed, highly realistic graphics. What they wanted you to do in college art classes was stand 20 feet away and throw paint at the canvas!

Mat: So a stupid question perhaps, but what are you like on paper? Can you use a pencil or oils perhaps?

Jim: Yeah. I don't much anymore, but just after I got out of the air force I supported myself by doing pencil sketch portraits for 25 dollars each. In fact, the main reason I got into it was that I felt a bit weak on the human face so I tried to teach myself. I've worked with airbrush, charcoal, watercolours, oils, just about everything that's out there. But I really prefer the computer.

Mat: I gather you were not happy with the original version of *Defender of the Crown*. What reservations did you have?

Jim: I was relatively happy with it at the time. All the music and the artwork had been done before the programmer was finalised. We had already tried two different programming teams who'd found it too difficult. I suggested to Cinemaware that we hire RJ Michael who designed the operating system for the Amiga. In trying to get it done so quickly, he was not able to use any data compression at all, so the game had to be on two disks instead of one, and even then a lot of my original artwork had to be cut out. I was also never really happy with the music.

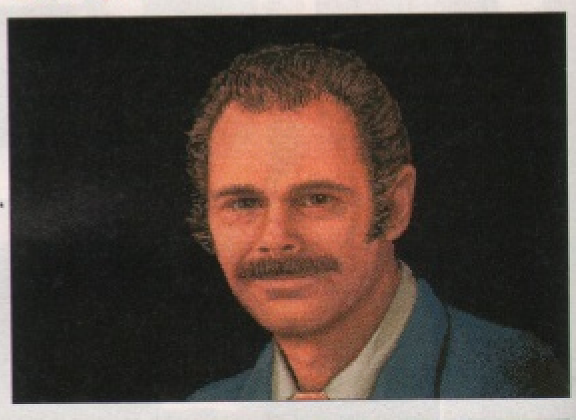
Mat: To what extent were the graphics in the game influenced by films?

Jim: Robin Hood is a pretty good one because things are very colourful in that. Of course, the actual game is based on Ivanhoe.

Mat: So that was the basis for the plot?

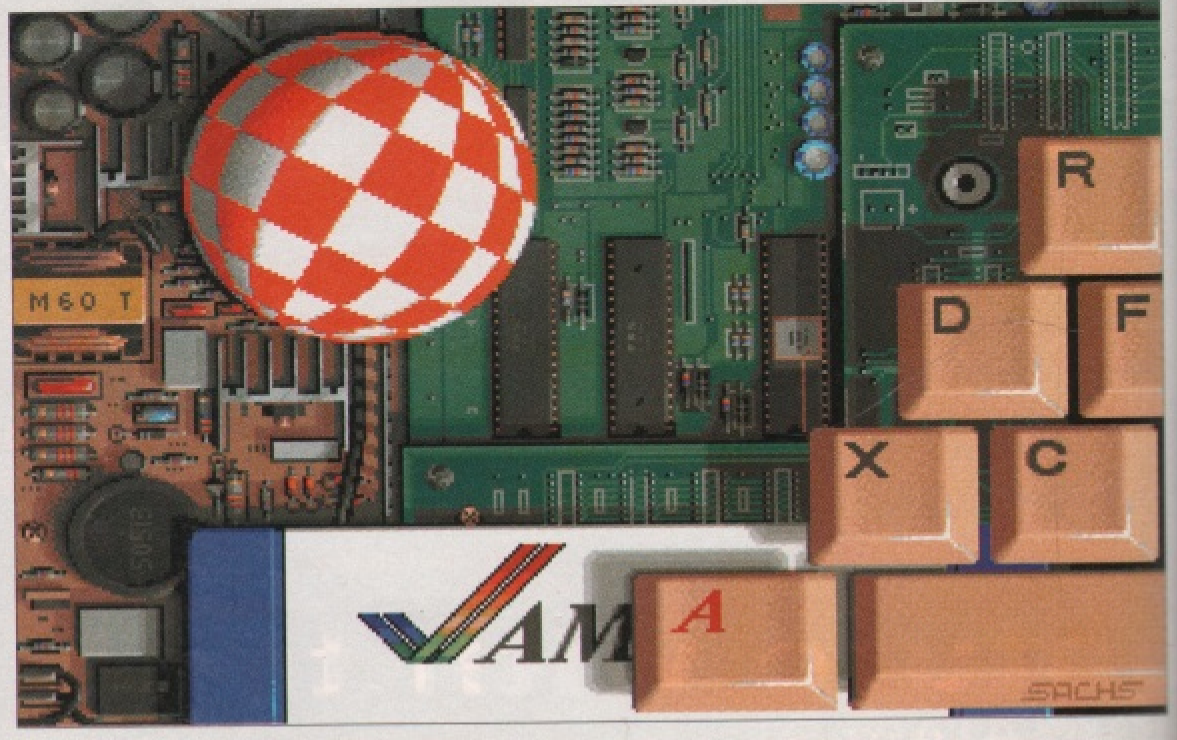
Jim: Yeah. Almost exactly taken from Ivanhoe. A lot of the names too. When I did *Defender of the Crown 2*, I based it even more closely on Ivanhoe in that now the goal of the game is not to try to take over England and become King. It's to raise £20,000 to ransom Richard the Lionheart back from Austria.

Mat: I believe you did that to get the historical accuracy?



Left: One of Jim's earlier works, this self protrait only took about a day to draw.

Below: It was inages such as this one which formed the cover for *Amiga World* magazine which really helped Jimto make a name for himself worldwide.



Jim: Right.
Mat: So is absolute accuracy and realism very important to you in game design then?
Jim: As far as visuals go, yeah I think so. People are looking for something that looks authentic. The costumes are authentic, the way the castles are constructed is believable. I think it really adds a lot to any project.
Mat: You said that you applied to be involved in Commodore development in 1985. Where did that actually lead you?
Jim: When I received my Amiga I worked for about 30 days just experimenting with it. The only graphics program available was Graphic Craft which was a really hard program to use. It was commissioned from Island Graphics by Commodore.

A lot of features that we take for granted now were just not implemented. You couldn't even draw circles! So anyway, I did about eight or 10 screens just to experiment, to see how far I could push the envelope. Then I took those to the first Amiga show which was in San Francisco in about February '86. I wandered around and showed my screens to people and got a lot of interest, but the two companies that really lured me were Cinemaware who were only in the conceptual stage at that point, and Aegis Development.
Mat: And that, of course, led on to *Defender of the Crown*. So at that time you were working with Commodore and Cinemaware?
Jim: No, not with Commodore. They were supporting me with developer hardware and information. A lot of my graphics ended up being used in their advertisements and in different demos and things like that. Few people ever asked me if they could do that, it was just taken for granted.
Mat: It would be true to say that *Defender of the Crown* helped sell Amigas as that graphic style epitomised the promise offered by the Amiga. What else did you do with Cinemaware?
Jim: I was only the art director at Cinemaware during *Defender of the Crown*. The working conditions were so bad that I told them that was going to be my one and only project.
Mat: What was the problem there?
Jim: Unbelievable pressure. People calling me at one and two in the morning to make sure I was still working. Everything was riding on that project. It was the first Cinemaware game to come out and it had to set the whole style and tone for a whole new genre of computer games. If you look at everything prior to that, it was pretty much *Pacman*!
Mat: But it succeeded, of course.
Jim: Yeah, and I'm very gratified to see how far it's gone. I mean it was very lonely. I would teach classes and try to make people understand that *Pacman* is not the only style that this computer can do.
Mat: Are you satisfied with the job that you've done on *Defender 2*?
Jim: Considering the age of the project, yes I'm pleased with the way it turned out. I got to add almost everything I wanted to make it as good as the original version should have been.
Mat: I understand that you had some input on the CDTV?
Jim: I did all the graphics that are built into CDTV. The rotating disk screen, the user interface for the preferences and the audios panel, and all that kind of stuff, that's all my design. On the CD32 that's not true, even though I was hired to do most of it. They changed it so drastically that I don't want my name even connected with it now.
Mat: So tell me about the original CD32 designs.



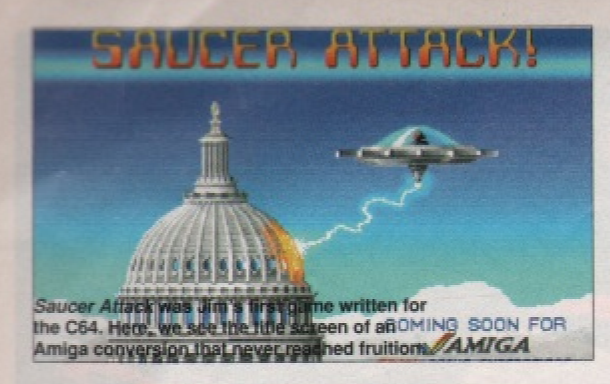
Living near Los Angeles where the traffic jams are constant it's not surprising to see that Jim is a motorbike freak.

Jim: I designed the start-up for when you turned the machine on. There was some music – a fanfare. They kept that. Then the letters C and D rotated to form a CD. Then the word Amiga formed out of a kind of aurora effect in the background above that burned in red and then the letters CD came in a kind of lightning effect. Then the colour cycling started in the background and they kept some of that, but they changed the logo.
Mat: They didn't like it?
Jim: They told me that I had a completely free hand to design what I wanted, but then it turned out they had already started using another design which they'd had licenced as their trade mark. So what Lew Eggebrecht told me was just not true. The art department there was already much farther along than I had been led to believe.
Mat: Did that make you angry?
Jim: Yeah. Not angry because they changed something I'd done, but because they changed my work for artwork that I wouldn't have accepted from one of my students on the Commodore 64 let alone the Amiga. This is the face to the world, by which the whole machine will be judged. That low resolution graphic makes the CD32 look like a toy rather than a serious contender for the Jaguar and the 3DO.

Hardware-wise the CD32 is every bit as good as those other machines, but people won't perceive it that way because of this toy-like atmosphere that's set as soon as you turn the machine on.
Mat: You keep referring to the teaching that you've done. Can you expand on that?
Jim: I did a series of seminars on the Amiga. I did all of the AmiExpos including Germany. I also gave seminars at colleges and different meeting halls where I taught for an entire weekend. I taught everything from how to draw, how to animate and how to record cleanly in a desktop video environment. I wasn't on very good terms with Newtek and after *Video Toaster* came out I stopped teaching because that was the way that everybody seemed to want to go. Nobody wanted to do two dimensional graphics anymore.
Mat: Changing the subject now. Do you think that Commodore has what it takes to carry the company forward to the future?
Jim: Not with the present administration. There are some upper level management problems that umm, well let's just say that, in my opinion, Jim Dione was not the right guy to go.
Mat: So what's the situation as you see it?
Jim: From what I understand, there's a movement to get a delegation together to go to the next stockholder's meeting which is held in the Bahamas. The reason it's held there is because that's where Irving Gould lives. It's very difficult for stockholders in the US to go to these meetings. So there's a movement to go to the Bahamas and raise a point of order to put this before the voters.

The two seats on the board that are up for contention are Irving Gould and Alexander Haig (who is the former Secretary of State, by the way). This movement wants to replace these two people with their own people so that the interests of the stockholders are better represented.

The idea is once the grass roots movement people get at least two of their people onto the board, they can swing the board into releasing [very long pause] well, let's just say a VERY senior member of staff. I don't know how to say this without mentioning his name, but there's one person at Commodore in a very high level position that has no interest in computers at all – no interest in making computers whatsoever. He's just in it for the money. And in our view [the grass roots movement] a computer company should be run by people that are very interested and fascinated by the product that they're making.
Mat: I notice that you're very reluctant to mention this person's name. Is that for legal reasons or because you fear repercussions?
Jim: Oh no. Commodore has paid every bill they ever owed me and they're not indebted to me at all, so I'm free and clear of Commodore at this point. I'm just not sure if my saying things like this will cause more harm than good. As things stand right now, I'm switching to 3DO. If the upper level management changes at Commodore, I'm perfectly willing to come back to the CD32 and do some major development on it.
Mat: Speaking of 3DO, how much of a threat do you think that poses to the CD32?
Jim: At the current price point there's no threat. At the price point that 3DO could theoretically sell at, it would be very competitive price-wise with CD32. I'm not sure if that's privileged information or not, »



Saucer Attack was Jim's first game written for the C64. Here, we see the title screen of an Amiga conversion that never reached fruition.

» so if I don't word it any stronger than that, you know why. I know what they can go down to and they can be very, very competitive against the CD32 if they want to.

Don't fall for the myth that 3DO is far more superior hardware-wise to CD32. It's not. In some respects CD32 will beat 3DO in just raw resolution. CD32 has over four times the resolution of 3DO.

Mat: So how's the CD32 doing over there?

Jim: It hasn't really launched over here yet. There's no advertising or anything. Still, it's a very strong piece of hardware and it's just a matter of getting the right support. They need some American developers too. They've only got British and maybe a few German developers right now.

They made a big mistake in not telling the developers about it a year ago at the big developer's conference in Florida. They made a lot of enemies there. A lot of companies paid their own way to be there from all over the world, and they went there thinking that they were going to hear all about the latest thing that Commodore was working on. But no, the machine was never mentioned. A lot of people were really upset about that.

Mat: But isn't it a fair point that with the market becoming ever more competitive, that they should want to stop the opposition from finding out what they're up to for as long as possible. Especially Sega who had their own MegaCD product?

Jim: Well the Sega machine was already out at that point and within the first 30 days it sold 30,000 units. Nintendo is still way off on the horizon even now. So no, I don't see that as a problem.

Commodore was way ahead of everybody else with the technology. I would have liked to see them tell all the developers about it. Get them started on it. You know it takes a long time to develop a CD32 title, especially anything that's based on a movie or something. Like a good version of *Jurassic Park*, maybe *Jurassic Park 2*, that rivals the movie. There's no reason that the graphics that we're seeing on CD32 can't be at least as good as the movie. Not the usual little overhead view, typical computer game style. That's just a sore point with me because I've been campaigning for over a year to be the one to do *Jurassic Park* on CD32 and then they gave it to Ocean.

Mat: You were also involved with *Brilliance*, the new art package from Digital Creations. What was your level of involvement there?

Jim: They would ask my advice about different user interface issues and features that I would like to see in it. I have a very heavy time investment in *Deluxe Paint*. I had more time learning and using *Deluxe Paint* than... well probably than anybody else in the world! Sixteen hours a day staring at that screen for seven years with almost no days off.

I was already on friendly terms with Digital Creations and they came to me a little over a year ago and asked me if I would lend my thoughts to what the user interface should include. At the same time they commissioned me to do the illustration that would form the box cover and would feature in all their advertisements. For that they gave me an Amiga 4000 and a monitor to go with it and a fast modem because we had to modem the picture back and forth every couple of days as they kept wanting changes made to it. In fact, I did that picture using a very early beta of the program, and my experiences using it helped them to improve it even more.

Mat: So how long did that title screen take you?

Jim: That took about three weeks of solid work and about another week when you combine all the retouches and changes that were made.

Mat: How do you feel it compares to *DPaint*?

Jim: I've switched from *DPaint* for the most part. There are a couple of things in *DPaint 3* that I find easier to use. I'm not talking about *DPaint 4.5*. Because the palette requester in that is in HAM, it's unusable for a professional. Now *Brilliance* has an interrupt halfway down the screen and the colours can change on every single scan line so everything in the palette is exactly what you'll see on the screen – nothing in HAM or anything like that. But every once in a while I will switch back to *DPaint 3* just for a feature that I'm a little bit more comfortable in using. Not that it's really any easier, or any more powerful, just that I'm so used to it.

Mat: You've already stated your view on the current Amiga situation, but if things change at Commodore in the ways you'd like, what kind of projects do you see yourself working in?

Jim: I'll probably do 20,000 Leagues under the Sea very soon.

Mat: Is that in conjunction with anyone?

Jim: No. Not yet. Probably Disney. When I was still working on the CDTV I had talks with people who are no longer at Commodore about the funding coming from them, with very little, if anything from Disney – even though it would probably come out under the Disney label.

Mat: Do you have any closing comments that you'd like to make?

Jim: I'm aways impressed with Commodore hardware and can't wait to see the new machines when they finally do hit the market. I'm very excited about the Triple A machines. There are a lot of features that I've been looking for for a long time that are incorporated into this new next technology.

Mat: Thank you very much for your time.


Graphics such as this made Jim the Logical choice as Artistic Director for the fleddling Cinemaware company.

AND FINALLY...

Amiga graphics are hot stuff. Whether it's using a 24-bit board to create photographic quality animations, or an ordinary 5-bit art package for titling your home videos, no other home computer comes close in terms of value for money or graphics power.

Even so, the world is constantly changing and no area more quickly so than computer technology. When the Amiga was born, PC graphics were positively neanderthal by comparison, but of course nothing stays the same and the PC market just kept growing and growing, with machines improving all the time. With the 486 S-VGA PCs, the Amiga seemed at last to have been defeated (although it was still a quarter of the price or less). Then, with their usual good timing, Commodore pulled a rabbit called AGA out of the hat, and, yet again, the Amiga reigns supreme as the de facto home computer.

Of course, technology companies nowadays must innovate or die and Commodore has an almost impeccable record in this regard, with CDTV being the only real fly in the ointment. Still, if you want to achieve widespread success, it's no longer good enough to build great hardware, you've got to have great software and preferably be PC compatible as well. Commodore's Chief of Engineering is a real genius called Lew Eggebrecht, a guy who has not only designed some of the hottest Amiga hardware in his time, but was actually one of the people who designed the original IBM PC.

The next generation of Amigas look absolutely certain to offer *Windows NT* support, and will offer even greater graphics features than the AGA machines. It's guaranteed that the new Amiga's palette will be greater than the current one, and that only seems to leave 24-bit as a serious option.

Whilst such a machine would eventually spell doom to all those manufacturers who offer third party graphics boards, it would mean that they could start work on video effects hardware safe in the knowledge that all users have a 24-bit machine to work on. As the minimum specification for Amigas increases, it seems likely that we'll be seeing considerably more sophisticated software. At the moment full screen motion video is only possible with special add-on cards and accelerators, but the launch of CD32 technology makes it likely that we'll be moving in new directions brought about by the massive storage offered by such devices. Of course we'll also benefit from the research that brought about the FMV card for the CD32.

Virtual Reality is a buzzword that just won't go away, and I suspect that future generations of the Amiga will be at the head of the queue to explore this concept in a home environment. Whilst we're not yet whizzing around the galaxy getting lost, in many ways technology has far exceeded even the wildest dreams, and your Amiga is right at the very forefront of home innovation.



F-117A™

The Definitive Simulation of America's Radar Elusive Jet



A shadowy, gleaming craft steals through the night sky. Out of sight but never out of mind. Sleek. Slicing through the dark. No blips register on the radar. No sign is given.

Then, in an instant, an explosion bursts through the murky twilight and, as quickly as it appeared, the Nighthawk melts back into the shadows.

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Hi,
Some of you have no doubt heard my **Radio 1** announcement that I'm off to the good old **USA** at the end of January 1994. After months of negotiations with my Bosses at the BBC I've landed the job of a lifetime as Radio 1's official West Coast correspondent. I'll be reporting live and Direct from Los Angeles and San Francisco with the odd Trip to New York thrown in for good measure. And so although I'll be living most of the year stateside I'm still going to be very much part of the Radio 1 network, and best of all I'm definately going to keep you Indi customers updated with all the latest computer news as well as the up to the minute games releases in L.A. and the UK.
So as soon as I've finished working on my suntan I'll be busy on the keyboard, reporting to everyone at Indi as usual.
Keep watching this space.

Best wishes
J.B

Jakki Brambles

STOP PRESS !!! Commodore have today announced that the best selling Amiga CD32 will now have a further two great games bundled with it making 4 in to[tal] (5* if you buy from Indi)
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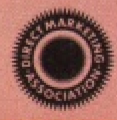
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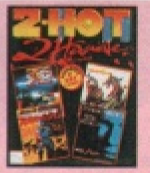
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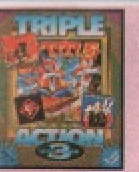
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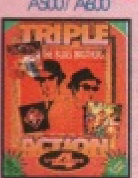


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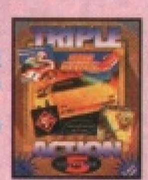


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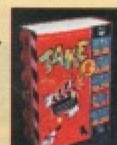
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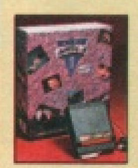
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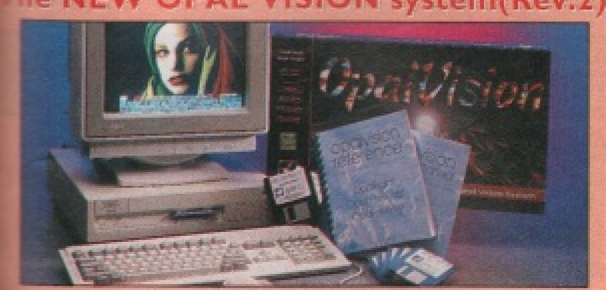
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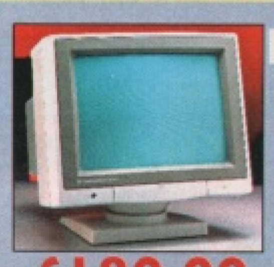



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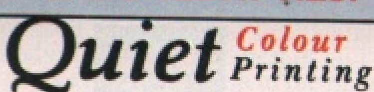
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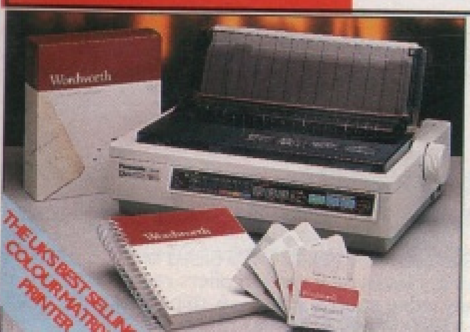




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We found the perfect printer in the and KX - P2123 quiet printer.
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Panasonic KX - P2123



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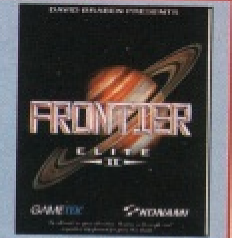
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KX - P4410 LASER PRINTER



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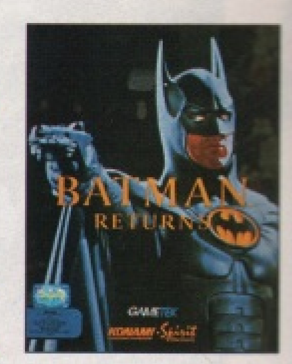
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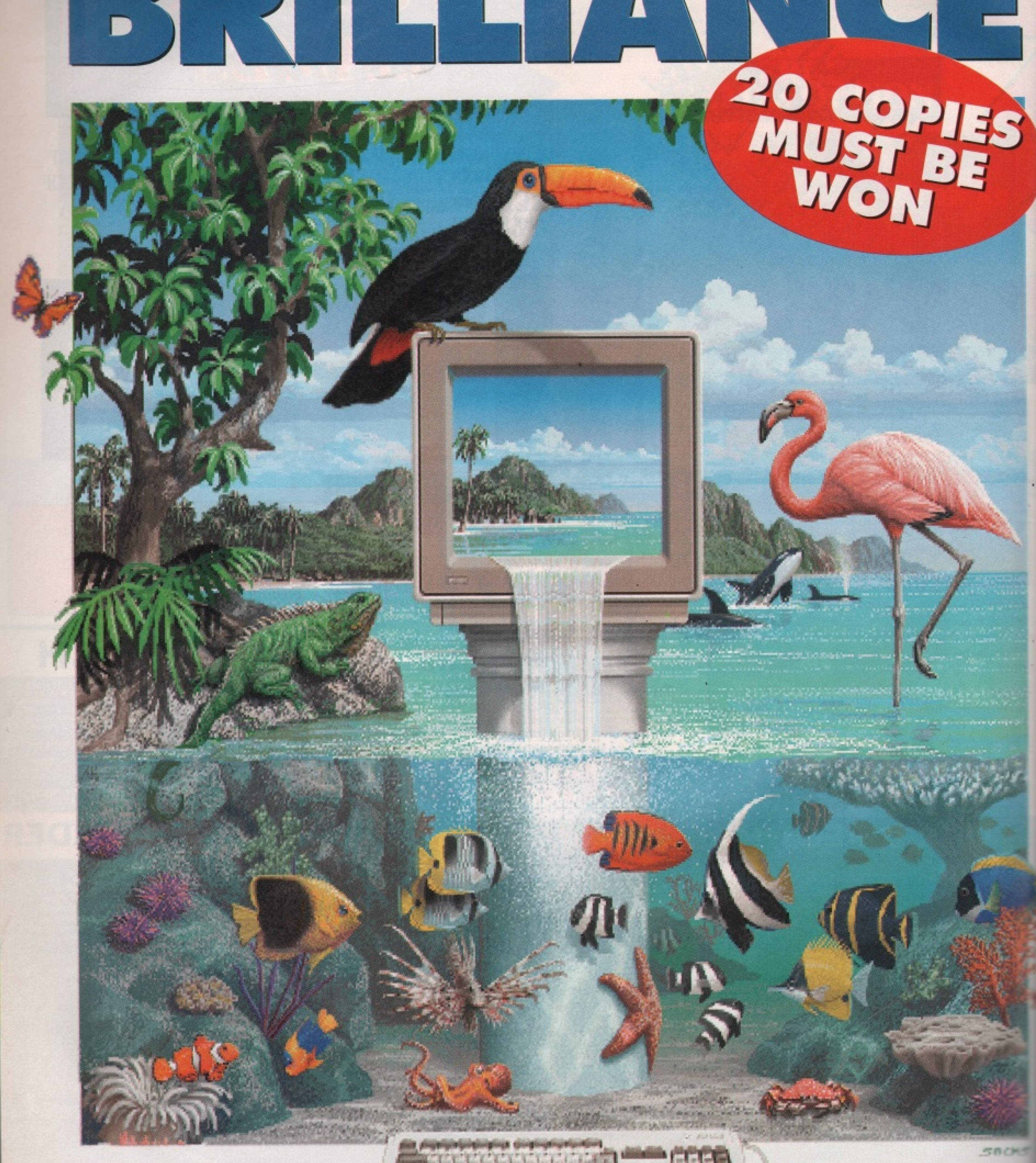
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BRILLIANCE

20 COPIES MUST BE WON



Earlier this year, a graphics program from American developers, Digial Creations, stunned the Amiga-owning world. Offering incredible graphics power at an affordable price, *Brilliance* was immediately hailed as the most powerful art program for the Amiga by both press and public alike. Easy to use, yet offering a myriad number of different tools and effects, the program has already racked up incredible sales in the United States and looks set to do the same over here.

Among its many features, *Brilliance* offers support for 24-bit images and the AGA chipset, has more tools than any other non-24-bit art package, includes unlimited undos and unlimited picture buffers, plus powerful new tweening options for fully automated animation. An ultra-flexible palette and gradient requester enables the user to define the smoothest colour ranges possible, and the program has more drawing modes than any other package currently available. On top of all this, *Brilliance* also offers a unique stencil draw mode for quick and easy definition and its image manipulation and image processing is incredibly fast offering a vast repertoire of options and tools.

No wonder, then, that *Brilliance* has been hailed as the ultimate paint package. And at only £149.95 (based on current exchange rates and a US price of $249) the program represents exceptional value for money. What's even better news is that, thanks to Digital Creations, we have 20 copies to giveaway. That's right, 20 complete copies of the Amiga's premier art package are up for grabs.

To win a copy, all you have to do is answer the amazingly simple question printed below, and then jot your answer down on the back of a postcard and send it to: Bloody Brilliance!, CU Amiga, EMAP Images, 30-32 Farringdon Lane, London, EC1R 3AU. Postcards should arrive no later than 28th February 1994.



1. Brilliance is published by which American-based company?

A. Digital Creations

B. Electronic Arts

C. Microsoft



Dan Slingsby, Editor of CU Amiga, says:

'You can't wish for a better graphics program than Digital Creation's *Brilliance*. It's got everything an Amiga artist could want, plus more besides. For many years, *DPaint* ruled the roost when it came to supplying incredible graphics power at an affordable price, but no longer. *Brilliance* has assumed centre stage and is now the Amiga's number one art package. It's so hot you could make a cup of tea with it.'

RULES 1. The competition is not open to employees of Digital Creation or EMAP Images. 2. The closing date for entries is February 28th 1994. 3. The editor's decision is final and no correspondence will be entered into. 4. Say something nice to someone today.

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WIN A CD32!

We're a generous bunch here at CU Amiga, or so the taxman keeps telling us as he takes an ever bigger cut out of our meagre monthly paypackets. So even though most of us haven't been able to save up for one of Commodore's amazing new CD32 consoles yet (except for Dan, who probably fiddled it through his expenses anyway!), we're going to give you all a chance to win one for yourselves. In fact, thanks to those lovely girls and boys at Commodore UK, we've got three to giveaway. Ya-hoo!

Just in case you've been living in Toytown for the last few months, let's take a closer look at exactly what's on offer: Apart from a rather sturdy cardboard box, you'll also find a CD32 nestling in-between two huge chunks of polystyrene. This rather stylish lump of plastic is, in fact, one of the most powerful games machines ever invented! It's 32-bit architecture and AGA chipset means that the CD32 is set to revolutionise the way we play our games. Why else would we have an exclusive CD32 section in the mag if we didn't think it was going to be a runaway success?! With quality titles like *Liberation* and *Microcosm* soon to be available for the CD32, the only advice we can give gamesplaying veterans is to rush out to their local software shop and buy one. Better yet, why not try and win one in our incredibly easy compo?

To enter, simply study the mindbogglingly simple question printed to the right and send your answer on a postcard or back of an envelope to: Gimme a CD32 You Cheapskates!, CU Amiga, EMAP Images, 30-32 Farringdon Lane, London, EC1R 3AU.

1. The CD32 was launched at a star-studded bash. Which famous telly presenter unveiled the new machine?

A. Chris Evans

B. Philip Schofield

C. Gordon the Gopher

3 WHITE-HOT GAMES MACHINES MUST BE WON

32bit

AMIGA CD32

RULES
1. The competition isn't open to employees of EMAP Images or Commodore, more's the pity.
2. Closing date for entries is 4th February 1994.
3. The editor's decision is final and no correspondence will be entered into.
4. Multiple entries will be chucked in the bin, so be warned S. Sampson of Swansea!

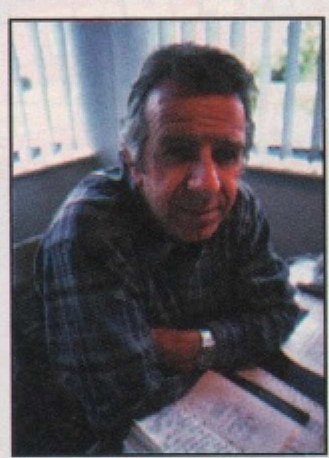
AMIGA SPOTLIGHT ON...



MINDSCAPE

If you were asked to name one of the UK's most successful software houses, chances are Mindscape would be high up on your list. For the last five years, the Burgess Hill-based company has been going from strength to strength, thanks largely to strict quality control and a steady stream of original products.

Geoff Heath, Mindscape's head honcho, made his first forays into the computer games industry in 1982. Realising the explosive potential of computer games, he left his job in the music industry (where he worked with celebs such as John Lennon and Paul McCartney), and took up full-time employment with Virgin Mastertronic. Seven years later, in 1989, Geoff formed Mindscape International and the rest, as they say, is history. With hits ranging from *Legend, Moonstone* and *D/Generation* to *Knightmare, Captive* and the pioneering piano teaching system, the Miracle keyboard, Mindscape merged with American-based outfit, Software Toolworks, in 1990, and have never looked back.



The man who started it all – Mindscape's Geoff Heath stares moodily at the camera lens.

Since 1989, the number of people working for Mindscape has grown from two to 80 people and profits have grown substantially, this year pulling in more than three million dollars. Having moved to Priority House in 1992, a superb new purpose-built complex in Burgess Hill, Mindscape have combined all its operations under one roof, including the manufacturing and distribution arms of its business. With product lines as diverse as *Speedball 2* on the Gameboy and *Mavis Beacon Teaches Typing* on the PC and Amiga, plus a range of educational and reference titles, Mindscape now develop for all the main hardware platforms including Nintendo, Sega, Commodore and IBM PCs and compatibles.



Geoff Heath (he's the one on the left), meets a real-life Battletoad at a press launch for their soon-to-be-released Amiga title!

From running the company from his dining room table in 1989, Geoff has built Mindscape up into a truly international operation with a reputation second to none...

COMING SOON COMING SOON

Here's just a selection of some of the Mindscape games you can expect to be playing in the months ahead.

BATTLETOADS



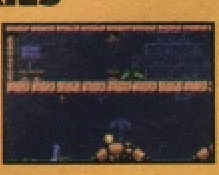
First previewed more than a year-and-a-half ago, the Amiga conversion of the hit coin-op has certainly taken its time making it to the small screen, but from what we've seen so far, the long wait is going to be more than worthwhile. This platform beat 'em up has been a hit on every games machine it's been released on, and the Amiga version is looking especially swanky. Expect hi-jinks aplenty as you seek to guide your toady friends across obstacle-strewn levels filled with all manner of bad-guys.

PIERRE LE CHEF IS OUT TO LUNCH



Pierre is a well-renowned chef capable of cooking up some incredible dishes. The only problem he has is the ingredients often don't want to end up as the main course. If that wasn't enough he has an arch rival, Le Chef Noir, who is intent on ruining Pierre's reputation. Set over 48 enormous levels, the aim of the game is to collect all the ingredients Pierre needs for his famous dishes and keep Le Chef Noir away from his larder. Terrific fun.

FURY OF THE FURRIES



Imagine a cross between *Lemmings* and *Morph* and you'll have a good idea what this game is all about. You control a Tiny, a small creature possessing a number of different powers. These enable a Tiny to swing about a level, shoot fireballs, breathe underwater or eat its way through scenery. Each level is packed to bursting point with all manner of traps, tricks and enemy sprites and you have to use all the Tiny's attributes if you want to progress further in the game.

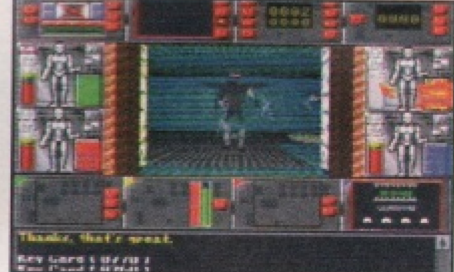
SEEK AND DESTROY



With *Cybernetix* and *Woody's World* already under their belt, Vision Soft return with a 360° top-down multi-directional shoot 'em up. In control of a state-of-the-art chopper equipped with a fiersome array of hi-tech weaponry, your overriding aim is to blast anything that moves. Each mission throws up a deadly array of enemy 'copters, missile silos, gun emplacements and weapons dumps. There hasn't been a top-down blaster like this one since *SWIV* hit the Amiga all those years ago.

NTERNATIONAL

THEIR FINEST HOUR



You don't have to delve too deeply into Mindscape's back catalogue to find their best-ever game – they've only just released it! The follow-up to Tony Crowther's award winning *Captive* game, *Liberation* is geared exclusively towards the CD32, and it's about as good as they come. Set in the far future, the sci-fi plot revolves around a government's attempts to frame innocent men for a series of gruesome murders. As Trill, the hero from the first *Captive* game, it's up to you to uncover this dastardly plot, set the imprisoned men free and, ultimately, bring down the corrupt government once and for all. Featuring light-sourced, texture mapped polygon graphics, digitised speech and CD-quality sound effects, *Liberation* is one of the finest role-playing games ever produced and is definitely the benchmark for future CD32 releases. If you want to find out more, turn to this month's CD32 Zone and read the full review which starts on page 60.

CD32 SUCCESS STORY



Mindscape are Europe's largest distributor of CD products, shipping an incredible three million units over the last three years, so it's not surprising to find the company actively supporting Commodore's new CD32 console. With three titles already under their belt (*D/Generation, Overkill* and the excellent *Liberation*), Mindscape are gearing up to release a steady stream of titles in the new year, including CD versions of *Alfred Chicken, Evasive Action, Genesia, MegaRace* and *Fury of the Furries.* Watch this space!

BEST PUBLICITY STUNT OF 1993



We've seen some wacky publicity stunts in our time, but Mindscape pulled off one of the funniest earlier this year when they entered their new platform star, Alfred Chicken, in the Christchurch by-election. Dressing up one of their product managers in a large furry Alfred costume, the most amazing thing about the whole affair is that Alfred actually attracted 18 real-life, honest-to-goodness votes and managed to force the rather-more-serious Rainbow Alliance party into last place!

AMIGA GAMES CHECKLIST

Over the years, Mindscape have released a massive number of Amiga games, so for all you completists out there, here is their definitive games list.

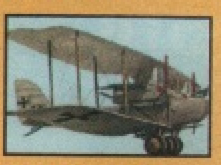
- ❑ 4D Sports Boxing
- ❑ 4D Sports Driving
- ❑ Alfred Chicken
- ❑ American Ice Hockey
- ❑ Balance of Power 1990
- ❑ Basketball
- ❑ Blue Max
- ❑ Captain Planet
- ❑ Captive
- ❑ Chessmaster 2000
- ❑ Chessmaster 2100
- ❑ D/Generation
- ❑ Das Boot
- ❑ Days of Thunder
- ❑ Deja Vu
- ❑ Deja Vu II
- ❑ Fire Brigade
- ❑ Fury of the Furries
- ❑ Genesia
- ❑ Harley Davidson
- ❑ Knightmare
- ❑ Legend
- ❑ Life & Death
- ❑ Mavis Beacon Teaches Typing
- ❑ Mavis Beacon Teaches Typing II
- ❑ Megafortress
- ❑ Moonbase
- ❑ Moonstone
- ❑ Overkill
- ❑ Paperboy II
- ❑ Shadowgate
- ❑ The Ultimate Ride
- ❑ Tracon
- ❑ Tracon II
- ❑ TV Sports Baseball
- ❑ TV Sports Boxing
- ❑ Willow
- ❑ Worlds of Legend

MARIO IS MISSING



Everyone's favourite Italian plumber is about to make his Amiga debut! Arch-enemies, Bowser and the Koopas, have captured Mario and are attempting to steal most of the world's famous treasures. Taking the part of Luigi, Mario's brother, it's up to you to use your wits and beat the Koopas as you follow them through time. There are more than 19 different cities to visit in the game, and each missing treasure must be returned to its original home. Edutainment at its finest!

EVASIVE ACTION



Set for release in the first half of '94, *Evasive Action* is a one-on-one flight combat game set in four different time zones: World War One, World War Two, the present and the future. Players can choose to either pilot the same planes in a dogfight or opt for entirely different models. In head-to-head encounters, players can engage in a deadly game of tag or simply shoot other planes out of the sky. With the emphasis on arcade action rather than a straight sim, this is great fun.

the cult classic collection



ZERO 87%

"Superior game of the hack 'n' slash genre."

Commodore Amiga
Atari ST

Commodore Amiga
Atari ST



CU Amiga 90%

"... superb graphics and some of the best animation that you're likely to see on the Amiga. Great fun and Core Design's best game so far."

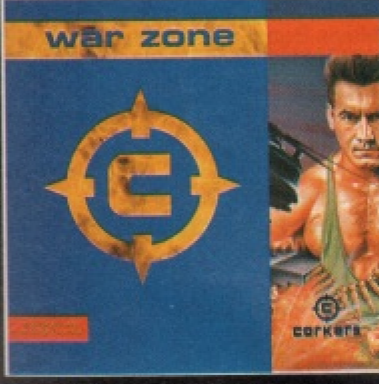
ACE 94%

"Core Design takes a graphically stunning journey into the world of Cybernetics."



Commodore Amiga
Atari ST
IBM PC

Commodore Amiga
Atari ST



ZERO 88%

"The scrolling, animation and colour are all of a high standard, but it's the play that wins the day. This is particularly true of the two-player version, but even for one player, the action is tough and just keeps on going... War Zone is an excellent arcadey shoot-em-up."

stay where its at

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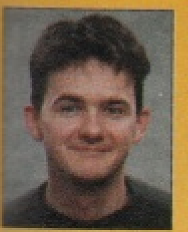


CD32 ZONE

The only place for news and reviews on the CD32

NEWS

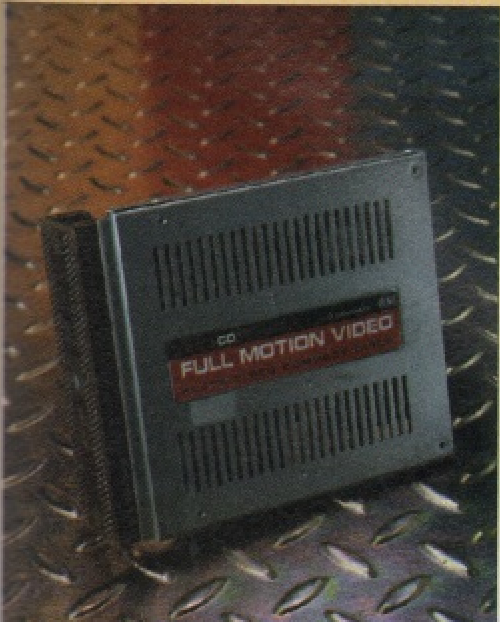
FMV UNIT GOES ON SALE



The launch of Commodore's Full Motion Video (FMV) card for the CD32 marks the start of a new era in home entertainment. Okay, I apologise for being such a pompous old windbag and getting a bit carried away with the purple prose bit, but this new add-on for the CD32 really is a marvellous bit of kit, and will allow CD32 owners access to a wide range of pop videos and feature-length movies. Although Philips managed to beat Commodore to the punch, and began shipping their FMV unit for CD-i a couple of months ago, it's good to see Commodore getting in on the act almost immediately. The price point, too, is encouraging – Silica (081 309 1111) are quoting a price of £199!

With the release of the FMV unit, the CD32 is now a complete home entertainment system, capable of playing games, audio CDs and block-buster movies. This really could be the start of something big – imagine buying a single CD containing the Jurassic Park movie, computer game and soundtrack! That's still a long way off with present technology, but with some staggering advances in compression techniques over the last few years, who knows what the future might hold.

Commodore UK's joint Managing Director, David Pleasance, is optimistic about FMV. 'I personally believe that the Video CD market is set to explode into life in the new year, thanks to full motion video. I think it's going to be much bigger than the games market and will probably act as a catalyst of change for the entire entertainment industry.' To back up his company's optimism in FMV, Commodore are planning an advertising blitz to coincide with the module's launch towards the end of December. There will also be a special demo disc sent to retail outlets which will feature video footage of the Eurythmics live in concert as well as demos of Mirage's *Rise of the Robots* and D.I.D.'s *Inferno*. 'We're going to be very bullish about it all. It's a fantastic innovation and it's going to revolutionise home entertainment.'



We'll have a full review of Commodore's new FMV module next month.

Dan Slingsby - Editor

NEW GAMES BUNDLE FOR CD32 ANNOUNCED



Commodore have just announced a new games bundle for the CD32. The new pack will still include *Diggers* and *Oscar*, but both Origin's *Wing Commander* and Flair's *Dangerous Streets* have been added to the line up. *Wing Commander* probably needs no introduction to long-time CU Amiga readers – it's a highly polished 3D space combat game crammed with a variety of missions and some spectacular 3D graphics. *Dangerous Streets*, meanwhile, is a new beat 'em up from Newcastle-based Flair, in the mould of *Streetfighter* and *Mortal Kombat*. Again, we'll have full reviews of both games in our next issue.

CLASH OF THE CONSOLES

We've got something rather special lined up for next month's CD32 Zone as we pit Commodore's CD32 against the likes of Atari's 64-bit Jaguar and the all-singing, all-dancing 3DO games console. Which one will win? Find out in thirty...

SKIDMARKS ON CD

Just as we were putting this issue to bed, we received a review copy of Acid Software's new game, *Skidmarks* – and it's a belter. Even better, it's going to be available for the CD32 in the new year. And to top that excellent news, the Antipodean software house are also going to include their excellent PD releases - *Insectoids 2*, *Defender* and *Zombie Holocaust* – on the same disc as an extra bonus.



BEST GAME EVER?!

Yes, we know it's a cliché, but we thought we'd be the first to use it regarding Mindscape's excellent new CD32 game, *Liberation*. Tony Crowther has pulled out all the stops on this one to produce an adventure of epic proportions. For the full review, turn the page...

CHEAPER CD PRICES? DON'T YOU BELIEVE IT!

If you thought CD software was going to lead to cheaper prices, then think again. Although we are seeing some product appear at a budget-busting £14.99 (thanks to the likes of Krisalis and Team 17), most games publishers are adopting £29.99 as their favoured price-point. Over the last year, floppy prices have also hovered near the thirty quid mark, and it appears that software houses are keen to make this new price stick, even though the manufacture of CD discs is considerably cheaper.

There are two main reasons why this should be so: increased development costs and a desire by the software houses to lessen the discount offered to wholesalers. Now, it's understandable when a premium product like *Microcosm* comes with a hefty price-tag attached, as Psygnosis have been working on the game for almost two years and incurred considerable costs along the way – they've got to recoup them from somewhere! But when you see what is, in effect, shovelware coming out at the same price, then it's obvious that some companies are only after a fast buck and don't really give a damn about ripping off the punter.

Cutting back the margins offered to wholesalers is another reason why games are appearing at inflated prices. Traditionally, distributors have been offered a discount on new product of approximately 55%. With the advent of CD, some publishers have been attempting to claw some of this discount back and charge a premium price. Unfortunately, all the poor wholesaler can do is either accept the new terms or refuse to take the product – not much of a choice when you've got the all-important Christmas selling period in full swing. Because the distributor's discount has been markedly reduced – some estimates put it at as much as 10% – these additional costs are then passed onto the retail end of the chain which results in higher prices all round.

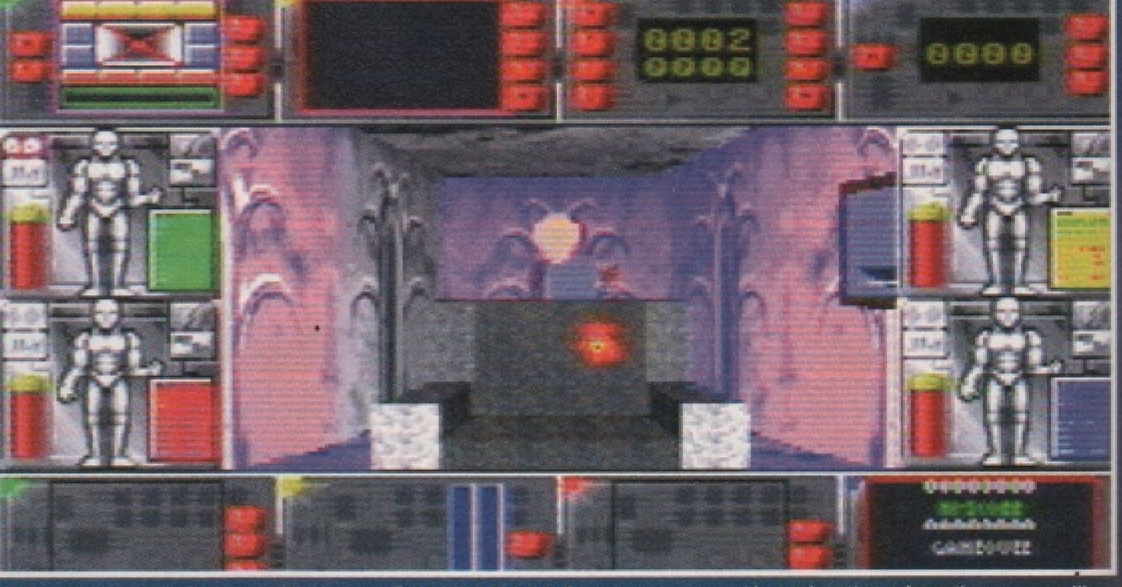
So, while many people have been arguing that the lack of piracy on CD will result in cheaper software, the exact opposite appears to be happening. »

LIBERATION: CAPTIVE 2 CD32



In the 28th Century freedom is a precious thing. Jon Sloan leaps forward to create a little liberation.

So far, we've only seen one game that truly uses the capabilities of the CD32. However, the game in question, *Microcosm*, may be a fun game and use loads of texture-mapped gobsmacking graphics but, at heart, it's nothing more than a simple shoot 'em up. *Liberation*, on the other hand, may not be able to boast the same depth of graphic quality that Psygnosis' game has, but it's light years ahead when it comes to gameplay. To my mind the CD32 was designed for adventures: no more disk swopping; stunning graphics; CD sound; digitised speech – it has the potential to contain all these and more. And *Liberation* very nearly has the lot. 'But enough high-praising waffle; what's it all about?' I hear you cry (bet you didn't know my hearing was so good did you?)



Conversations are the lifeblood of *Liberation*. To hold one just walk up to a person and bump into them. An option screen will open up with a list of responses. If the person is in a bad mood they may decide not to talk or even attack you.

Life in the future must be very bleak. At least that's what virtually every sci-fi writer has told us since the genre came into fashion. And in that respect *Liberation* is no different. There's a police state, oppressive dictatorial Empire and a world-wide conspiracy where innocent men are being framed for murders they didn't commit. As Trill, the hero from the first *Captive* game (and the man with the world's worst haircut - after our cranially challenged Editor that is), you decide to uncover this plot and set the convicts free. To complete the game you need to free the convict designated for that particular scenario. That may sound easy but, with over 4,000 possible variations, you'll soon realise that *Liberation* is going to keep you going well into the new year.

Trill is a smart man. I mean; apart from discovering a global conspiracy, he's intelligent enough not to get involved personally in any of the dirty



Most public buildings and a few homes have video monitors. Log on to one of them and you can access details about specific buildings. You can even hack into the police computer. Such unauthorised access is extremely dangerous though.



You start the game outside the city records office. It's a good idea to pop in there to get a few directions to the locations that were mentioned in the news reports your droids have logged in their memory.

LIGHTS, CAMERA, ACTION...

One of the single most impressive features about *Liberation* is its opening sequence. This cinematic style intro may not be what you'd expect from a CD opener (i.e. no live-action video, etc.) but it's still very stirring indeed.

Lasting around seven minutes it tells how Trill first uncovers the conspiracy and is accompanied by some of the most aurally stimulating music ever to grace a game on any format. As a jaded journo I've heard many a tune tinkle from my Amiga's speakers over the years but few have caused my heart to skip a beat like this one.

Anyway, on with the intro...



Trill is rescues by his robo buddies after years of confinement in *Captive 1*. No wonder he's dead against the wrongful imprisonment of others.



Sitting at home, bored to death, Trill decides to watch the news. Being, as it is, the 28th Century he can change the background colours and even the presenter's suit if he doesn't like them.



The main news report is based on a protest at a local detention centre. Apparently there's a prisoner there who's supposedly murdered Counsellor Dran.

work. Instead, he's disappeared into the mountains outside the city and has sent a team of four droids in to sort it out. Controlling them from his laptop computer, Trill (i.e. you) has a first-person perspective on the action. These head-mounted video cameras allow you to view the light-sourced, texture-mapped polygon-filled city in great detail. It's obvious that a lot of thought has gone into the graphic design and, although it's not that particularly life-like, this stylised view of the world is impressive and, above all, workable.

The downside of all this texture mapping is your robot buddies do amble rather ponderously along and the animation frames are few and far between. Tony Crowther, the coder, has borne this in mind and, if you plug a chip into a droid's head, you can alter the game parameters to your choosing.

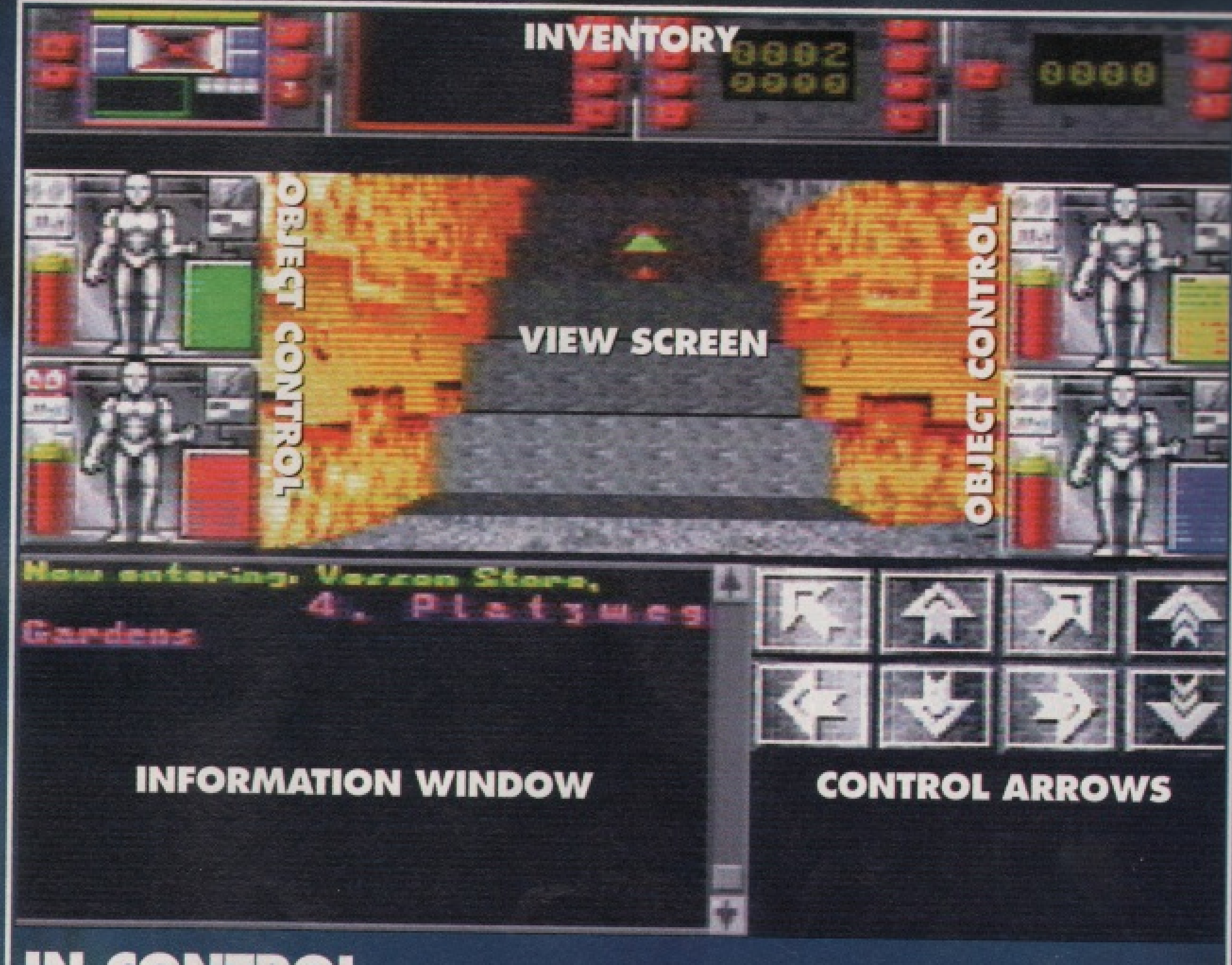
This customisation is carried through into all the major aspects of the game. You can alter the screen layout, the fonts and colours used, the make-up of your droids – in fact, virtually everything that a reasonably experienced adventurer would want to do.

Being droids, your team members have perfect memories and, boy, do they need them. The gameplay involves you tracking down the location of the prisoner by talking to, bribing, shooting and making contacts with people across a huge city that's set out on three levels. So, every conversation you have, every clue you uncover and every address you find is stored in the droids' huge memory chips and you can review it at any time.

Better still, one of your team has a city mapper which can be programmed with addresses so there's no need for yards of graph paper here. Besides, trying to manually map a city as big as this would take you forever and you'd still not get it right - imagine trying to do an A-Z of London, from scratch! To make things simpler the city is divided into zones and levels. The graphic sets for each are subtly different so it shouldn't take too long to find your way around.

The drawback about having a realistic city is that people move around freely and do normal, everyday random things. This makes your job doubly difficult: not only do you have to track down the captive's location but you've also got to find the people who're going to give you the clues to do so.

But, hey, that's where the fun is. Besides, the game constantly monitors your progress and, if it sees you floundering for too long in one place and not making any headway, it'll pop in a useful note or tip to guide »

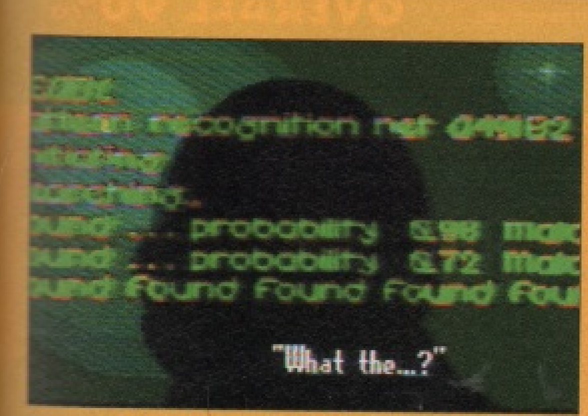


IN CONTROL

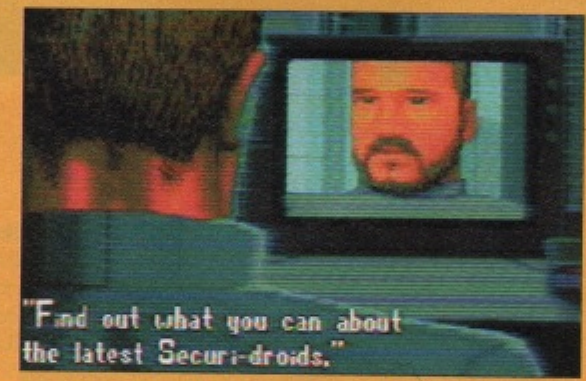
Controlling *Liberation* with the joypad is not a good idea. In fact, it's a bugger to do. To really obtain maximum functionality from the team you need a mouse. Left and right clicks over the appropriate icon are all that's required. It's a good thing too since the control system is not the most user-friendly one to grace an RPG. It'll take you a little while to get used to where everything is and even then manipulating two or three buttons on the joypad at the same time is only achievable by the most dexterous players. To help you out here's a quick guided-tour of what a typical screen layout should look like.



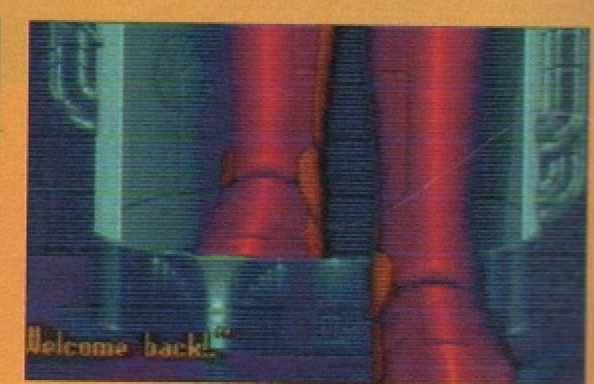
The city is reasonably detailed. The sky is quite interesting. Apparently this lovely garish colour is due to the depletion of the ozone layer.



Deciding to investigate for himself Trill jacks in to the local police computer. Only to find that there's been an awful lot of similar deaths of late and that the deceased had just been interrogated by a cop droid.



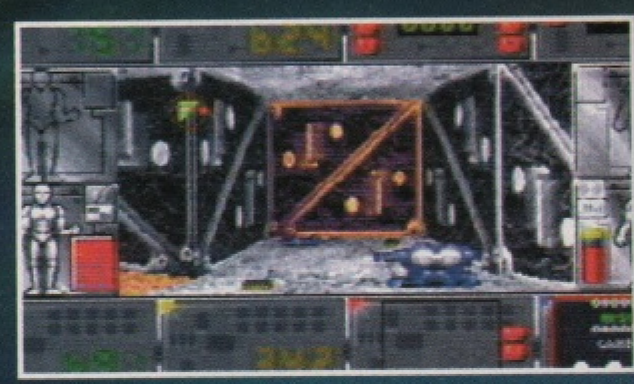
Trill decides to call his friend for help. Perhaps there's more to these deaths than meets the eye. Trills asks him to check it out. Suddenly, his computer warns him that his line is being tapped. He tells his friend to meet him at the usual rendezvous.



This may be tough, so Trill pops down to his basement to defrost his droid team for one more mission. And so the adventures begin as you journey off for more fun, mayhem and sporadic violence.



Shady characters hang around the lower levels. If you're not careful they'll mug you. Some, however, are willing to do business and will sell you everything from a shuriken to droid's limbs.


]Take my advice: don't pick a fight with a bank security guard – they're very tough. Even if you beat one you still won't be able to use the teleporter he's protecting.

» you to your destination. The game isn't the only thing that's monitoring you, though. Your activities have been noted by the corporations which control the city and the police force, so you're being hunted by cop droids who should have been told to take you in dead or alive; unfortunately someone left out the 'alive' bit. Hang around at one location for too long, tap into the wrong police computer or discharge your weapons in the wrong place and you'll soon find yourself surrounded by heavily-armed robots out to tap your oil, the hard way.

You're not without defenses though. You start the game with a pre-set selection of reasonably powerful weapons; if you find an armourer you can buy new cartridges for them, substantially adding to your firepower. If you've got the cash, you can obtain completely new weapons with enough explosive charges to level a small city block. There are even certain weapons that are undetectable by the scanners located in the more important buildings, but they cost a packet. Try and get hold of them 'cos, believe me, you'll need 'em. To balance for this, the bigger the gun the larger the charge it takes off your robot's battery every time it's fired. Fortunately, there are sockets hidden in specific dwellings which'll recharge the batteries.

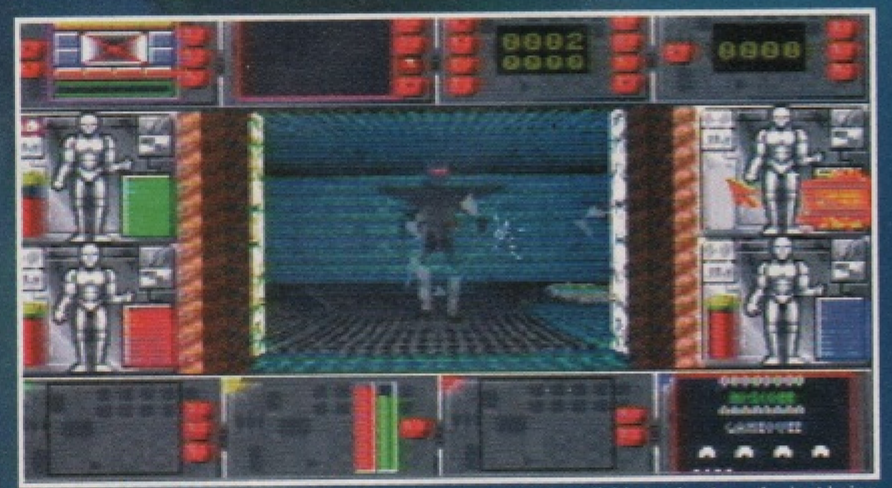
By now, you ought to have realised that *Liberation* is a complex game and it'll take a good couple of weeks to make any decent progress in it. That's how RPGs should be! This game has a depth to it that I can't remember having ever seen on an Amiga RPG. It's the first one of its kind to truly challenge the masterpieces you can get on a PC. I took it home with me one weekend and ended up losing two days. Like a lover I ate dinner with it, went to bed with it and woke to find it beside me the next morning. Unlike a human version though there was none of that bad breath, smudged make-up and 'Oh my God. Why did I do that?' feeling you usually get. I haven't got around to proposing marriage just yet but I'm almost there. Virtually every aspect of its construction deserves praise. The graphics, though not as realistic as I would have liked, convey the proper atmosphere nonetheless. For instance, the shady characters on the lower levels are shrouded in long cape things so that only their beady eyes show.

The soundtrack, too, is dreamy and changes tempo according to the situation you're in: walk around to a slow-paced mellow tune and fight to an up beat dramatic track – brilliant. Best of all there's digitised speech that, despite at times being repetitive, makes you feel you're really holding a conversation with the characters.

The storyline will keep you hooked even when you feel you're stuck for what to do next. Even then you won't be stuck for too long – something will turn up, if not a clue then a hulking great cop droid intent on spilling your coolant.

Liberation is a game and a half. It's long, deep and satisfying – a bit like a good cigar (what else did you think I meant?).

In fact, the only question left on my mind is 'Will you marry me?' CU


People don't like you walking into their homes uninvited, and are liable to shoot you for just being there. Combat is easy to conduct: just right-click on the droid's energy cell to fire whatever weapon is at hand.



Your backpack works in a weird manner. Basically your droid can carry as much stuff as you can fit in there. So, it pays to pack well.

MINDSCAPE: £34.99

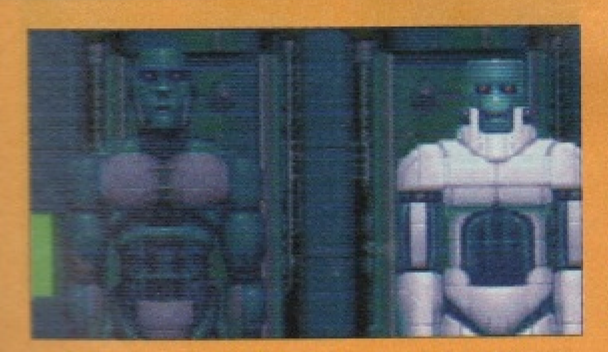
MINDSCAPE, PRIORITY HOUSE, CHARLES AVENUE, BURGESS HILL, W. SUSSEX RH15 9PQ.

RELEASE DATE:	OUT NOW
GENRE:	RPG
TEAM:	BYTE ENGINEERS
CONTROLS:	PAD/MOUSE
NUMBER OF PLAYERS:	1

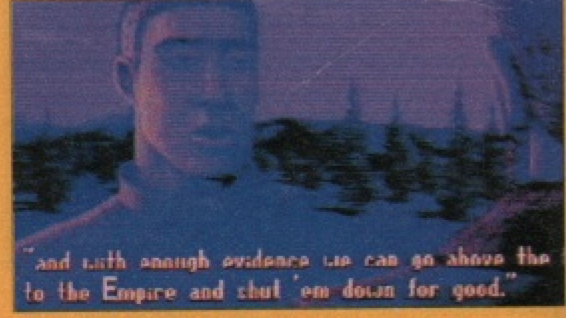
GRAPHICS	86%
SOUND	90%
LASTABILITY	92%
PLAYABILITY	90%

"Loads of game for your money. Don't miss out on this one."

OVERALL 90%


The droids awake and immediately head for the armoury to tool up. They're an emotionless bunch but useful in a scrap.


Trill loads his van up with the droids and heads out into the hills to the rendezvous.



There his worst fears are realised. His friend informs him that Cop droids are going haywire every time there's a magnetic storm. The managing corporation is covering it up by framing innocent men - Trill sets out to free them.

ATTENTION ALL CREW !

REPORT TO MAIN BRIDGE





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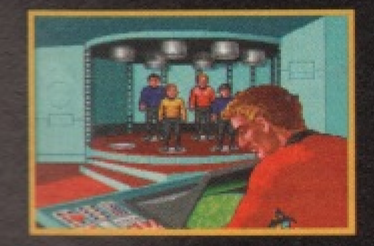


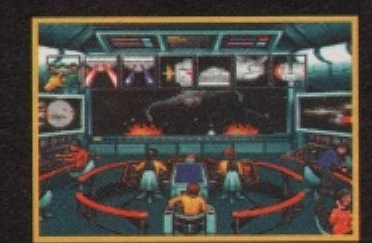


"It's a game Jim, but no
as we know it"

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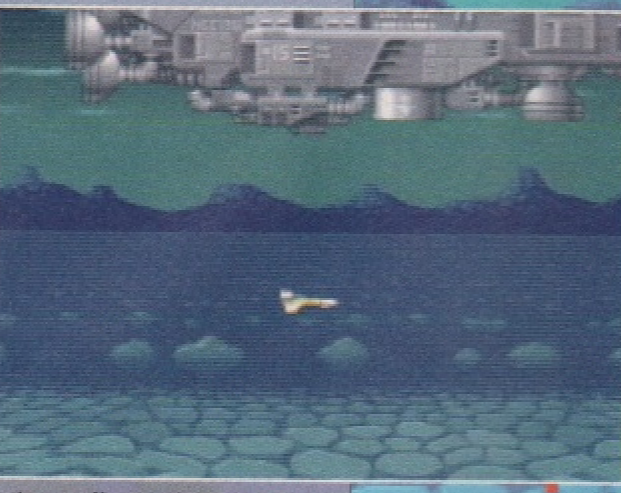
OVERKILL/LUNAR-C



£29.99 – MINDSCAPE – 0444 482545

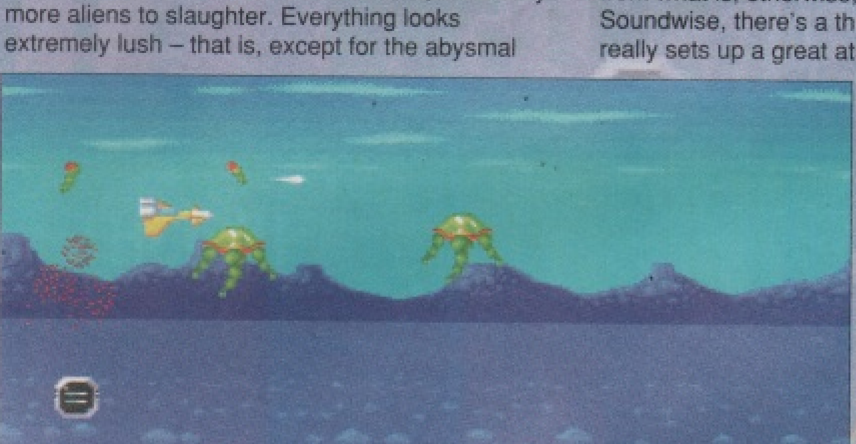
CD 32

Shovelware this might be, but it's darn good shovelware all the same. Already available on the A1200, *Overkill* is modelled on the wireframe arcade hit of yesteryear, *Defender*. Although the new game has been tarted up with layer upon layer of scrolling parallax backgrounds and the ship under your control can pick up a number of power-ups to increase your chances of success, the basic gameplay is almost exactly the same as the aging coin-op classic.



The idea behind *Overkill* is to drop off a team of assault marines onto a planet's surface in an effort to destroy a number of valuable Trilithium crystal deposits which an enemy race is trying to get their hands on. Each marine has an explosive charge which they can attach to a crystal in order to blow it up. Once they've achieved this objective, it's then up to you to steer the assault craft back to the waiting marine, pick them up and rearm them, and then transport them to the next crystal to be disposed of. While your men are taking care of the crystals, you've got to defend them by blasting any alien attack ships out of the stratosphere. This is, of course, easier said than done, as the aliens have a number of tricks up their sleeves, not least of which is the ability to mutate into even more hideous and dangerous opponents once they've digested the nearest Trilithium crystal.

Able to fly your ship either left or right, across a smoothly scrolling landscape, it's best to use the small on-screen radar to locate the alien nasties and then zoom off to give them a bit of nuclear armageddon. After level one, things get decidedly more difficult, with fiercer attack waves, and many more aliens to slaughter. Everything looks extremely lush – that is, except for the abysmal main sprites. Both your ship and detachment of marines are spindly looking things which detracts from what is, otherwise, a great looking game. Soundwise, there's a thumping intro track which really sets up a great atmosphere, and the in-game sound effects are just as spooky.



Overall, *Overkill* is a very polished game which makes full use of the 256 colours at its disposal. The CD32's joypad controls are responsive, there's tons to do and the action doesn't relent for a minute. Turn down the lights, crank up the volume and get ready for some serious blasting. **84%** »



LUNAR-C

Not content with giving you one game on the disc, Mindscape have included an extra game as a special bonus. And what a game it is! Well, actually, it's a fairly direct copy of Team 17's *Project-X* game – but then T17's classic blast was highly derivative itself.

Lunar-C is a horizontally scrolling shoot 'em up that comes complete with power ups and the usual army of marauding alien bugs and beasts. Things start off sluggishly, thanks to your ship's poor response, but once you've managed to blast a few aliens and pick up the power-ups they leave behind, you'll be able to improve both the speed and handling of your craft as well as bolting-on all manner of weapons and armaments.

The most annoying thing about the game is some of the rather fiersome attack waves which speed onto the screen at an astonishing rate and really don't give you much of a chance. Apart from that little niggle, however, this is a brilliant blast. The game's designers have also come up with a novel way of representing the number of lives you have left. These are shown as a power bar which means that you can get hit a number of times before exploding and dying, rather than exploding and having to wait for your craft to rematerialise on screen; this helps keep the pace of the game at a breakneck speed. Addictive stuff!

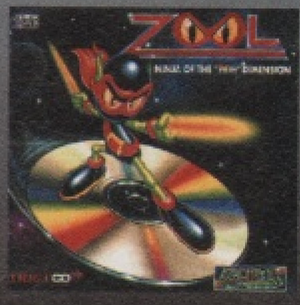


ALSO AVAILABLE

As we were going to press a lorry load of top-notch CD32 games came careering through the office (which is particularly difficult as we're on the fourth floor these days!).

Here's just two titles which you'll be able to find in your local software emporium right now – full reviews next month!

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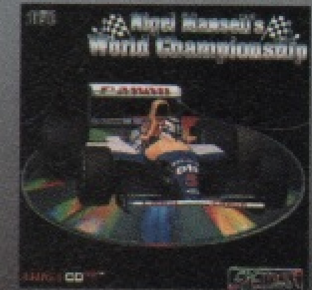


This one needs no introduction! Everyone's favourite Space Ninja from the Nth Dimension dons his DMs once more to smash the evil work of Krool and his assistant, Mental Block.

Set over seven levels of anarchic mayhem, *Zool* pits the player against all manner of adversaries from the lumps of blancmange found in Sweet World to the deadly musical notes that inhabit Music World.

Fun and amusing, this is one game that will last and last. Excellent 256-colour graphics too!

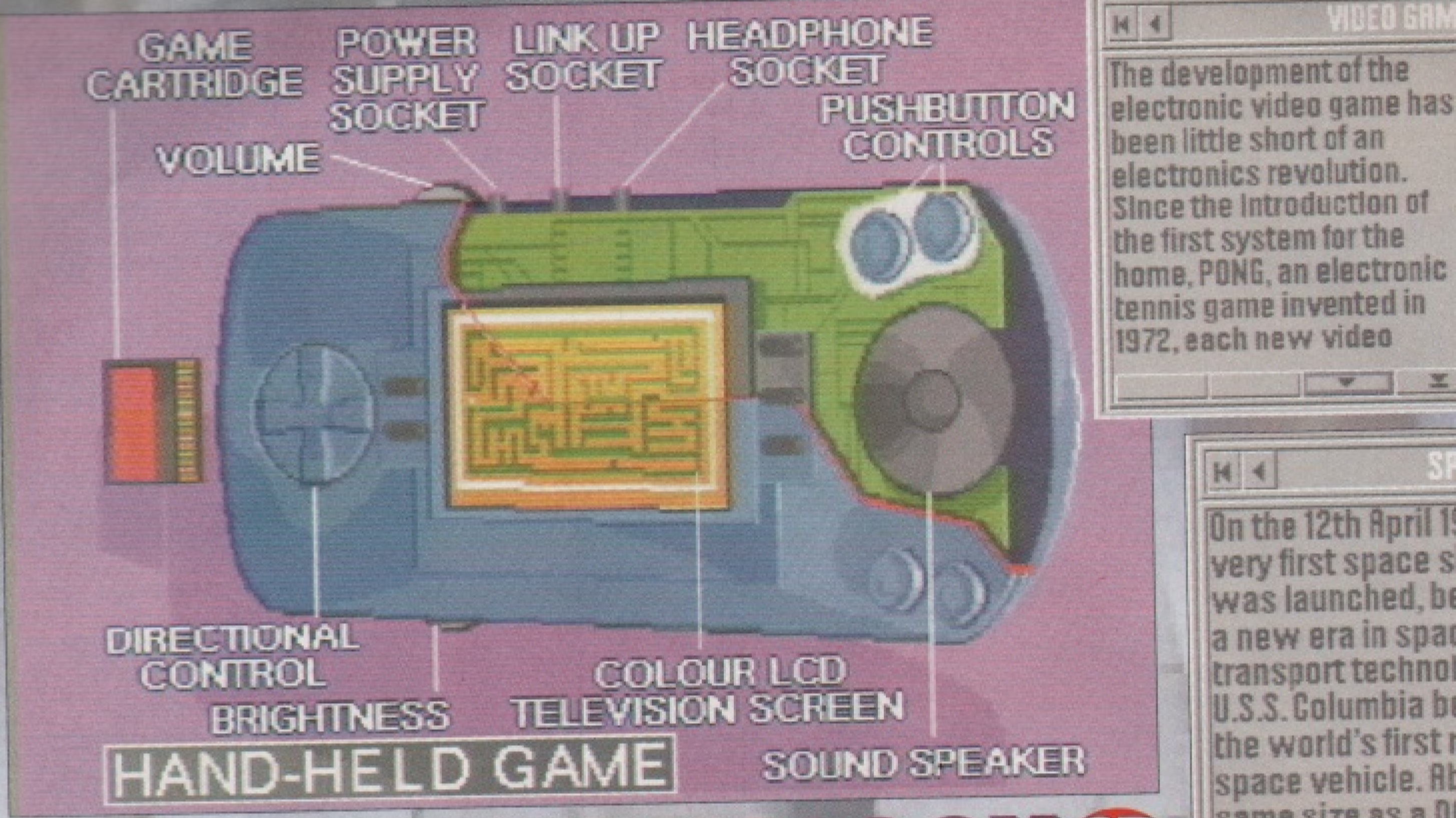
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Featuring enhanced graphics, actual Renault F1 engine sound effects and real time coaching from Nigel Mansell himself, the game has come a long way since its floppy incarnations. We'll be taking *Nigel Mansell's World Championship* for a full test drive next month.





SPACE SHUTTLES

On the 12th April 1981 the very first space shuttle was launched, beginning a new era in space transport technology. The U.S.S. Columbia became the world's first reusable space vehicle. About the same size as a DC9





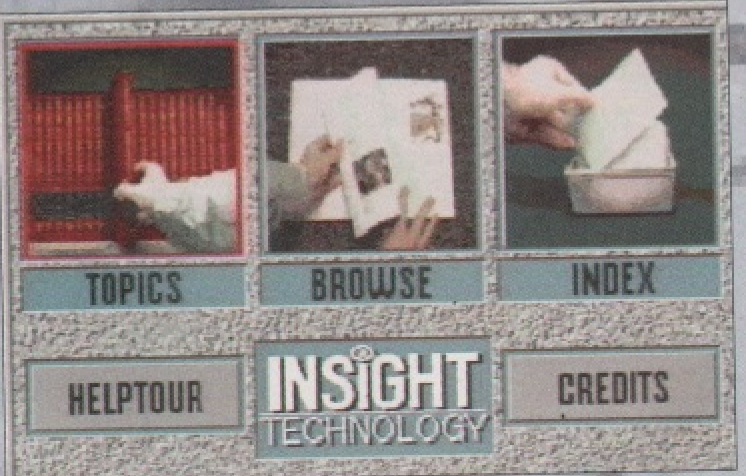
INSIGHT TECHNOLOGY CD32

£33.99 – OPTONICA/COMMODORE – 0628 770088

» Mention multimedia to most people and they'll either look at you as if you've said a dirty word or just fall asleep as you speak *[which happens a lot to our News Editor, Tony Dillon, funnily enough – Ed]*. It's not that multimedia is boring or anything, it's just that no one really seems to know what it is or what it's supposed to do.

For the record, multimedia is 'the integration of graphics, video, sound and text under the control of a computer in order to perform a specific task'. I know this because it's written in my computer dictionary, but it hardly makes the pulse quicken, does it?

However, where multimedia gets really interesting is the way in which sound, video, graphics and text are combined. Over the next few years, we're in for something of a revolution in the way that information is presented, and it's all thanks to our good friend multimedia. For instance, instead of pushing around a shopping trolley in a supermarket the size of Wembley Stadium, imagine being able to browse through a virtual reality shopping mall via your TV, picking out the goods and services you need at the click of a button.



Another application could be the interactive travel agent where a prospective holiday maker slots in a CD disc into their player, selects a choice of holiday destinations and settles back to watch an audio-visual presentation of each area. There could also be a number of more specific text menus listing anything from the best local clubs and pubs in which to swing your pants to details of where to find a childminder to take care of the kids while you have a good time.

Another area where multimedia could make a big impact is in education. There's nothing more boring than a book full of text, especially if the subject's something that's difficult to get to grips with in the first place. Realising the possibilities presented by Commodore's new CD32, Optonica have come up with a multimedia guide to the way things work. *Insight Technology*, the first in a series of titles, is a fascinating title which manages to combine video, audio and text to provide a truly exciting and informative technology reference disc.

Taking its lead from everyday objects, Optonica have set out to explain how each object works. From guns and video games to water-wheels, robots and helicopters, the disc is an intriguing look at technology at work. The choice of subjects is presented in an alphabetical list which can be scrolled through until the desired option is highlighted. Once you've decided on a topic that interests you, merely press a button on the control pad and the relevant entry will be displayed after a few seconds disc access.

Each entry consists of descriptive text, annotated diagrams and a number of digitised pictures. There's also a 10 second narration accompanying each topic with some sequences including some primitive animations using colour cycling. Although the sound quality of the narration is not brilliant, it's easy to understand what's being said. My only complaint is that there's not enough of it! Picture quality is excellent and it's obvious that a great deal of care has been taken in the photography and subsequent scanning of each object.

A number of entries are also accompanied by video footage, complete with sound. Occupying roughly 1/8th of the screen, these last for approximately 20 to 30 seconds. Although it's nice to watch these additional clips, the choice is a little inappropriate at times, suggesting that Optonica weren't all that fussy in what they decided to include. For example, on a section about submarines, all you get to see are some dials and machinery which might be from the engine room or bridge of a submarine, but it's difficult to tell. Surely some exterior shots of a submarine plumbing the ocean depths would have been more appropriate in this instance!

Overall, Optonica's *Insight Technology* is an interesting addition to the growing numbers of CD32 releases. Although the number of topics isn't vast, there's enough here to stimulate both adults and children, and it's the ideal tool for learning how everyday objects work.

91%

VIDEO GAMES

The development of the electronic video game has been little short of an electronics revolution. Since the introduction of the first system for the home, PONG, an electronic tennis game invented in 1972, each new video





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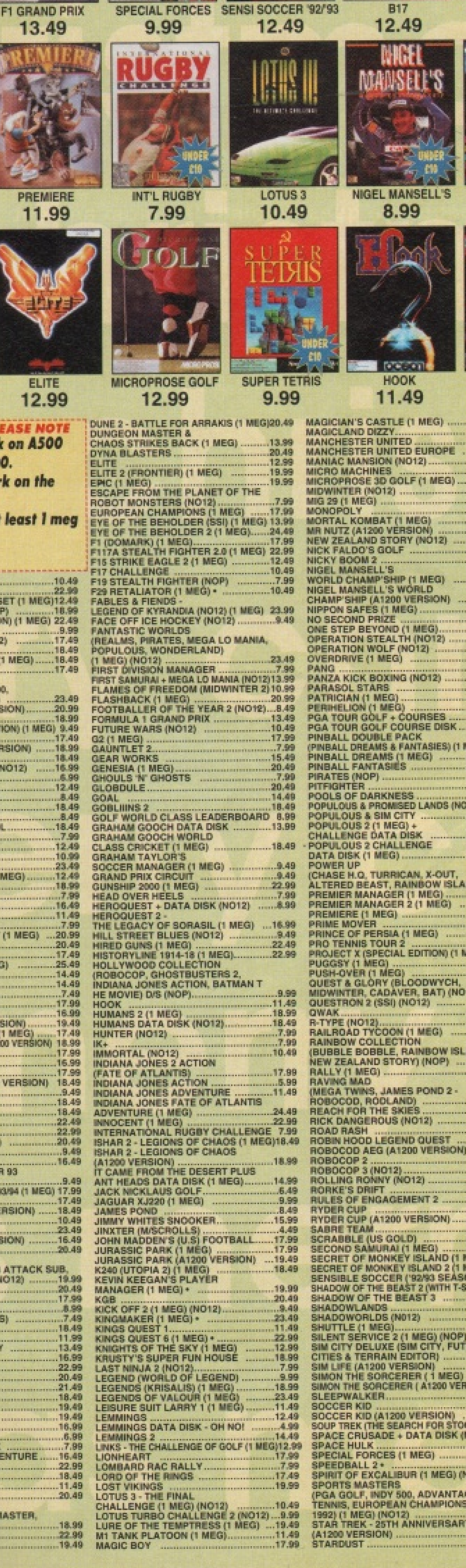


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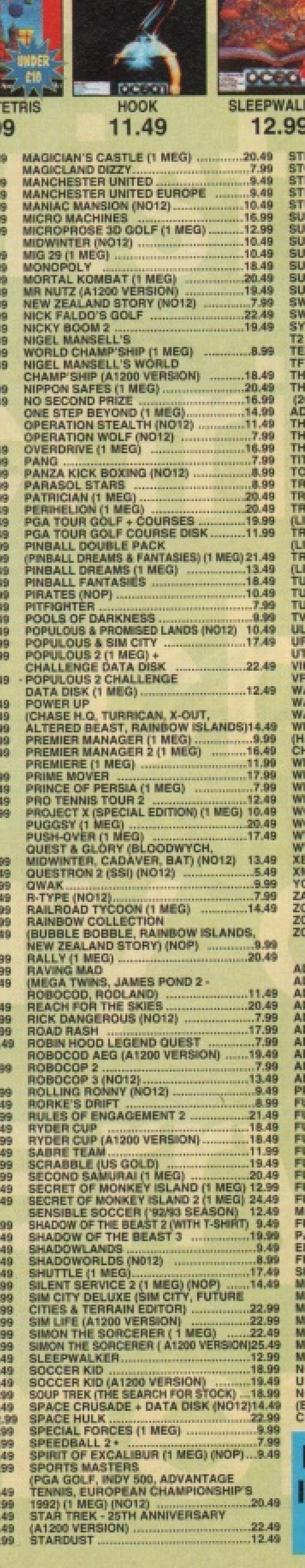
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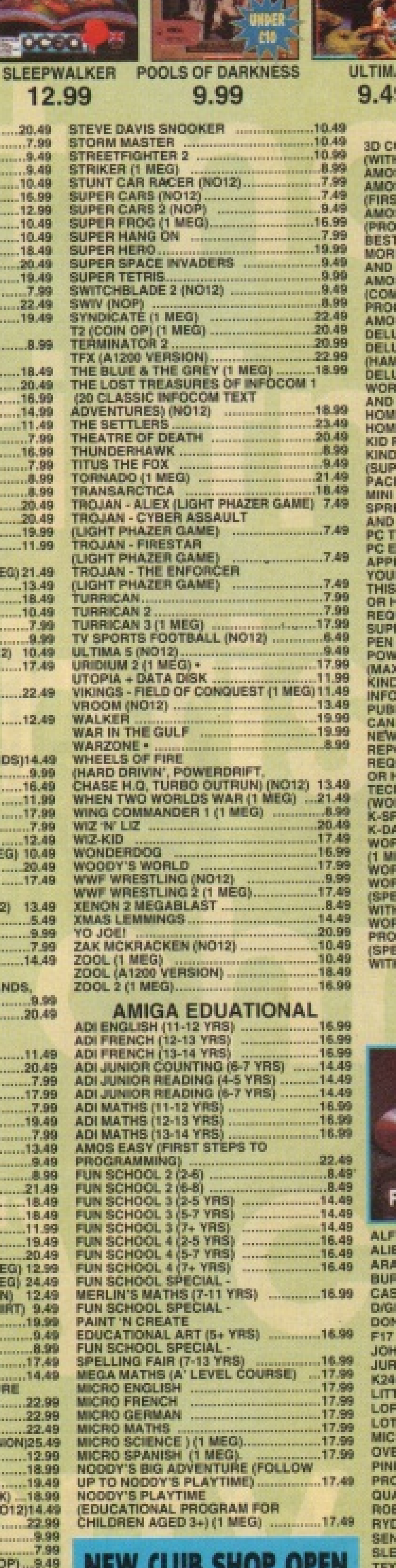
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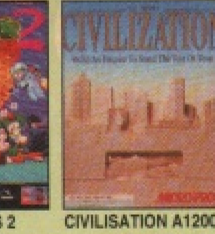
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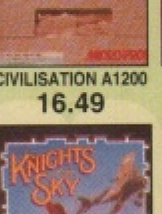
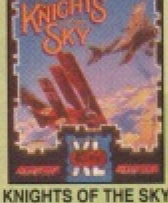
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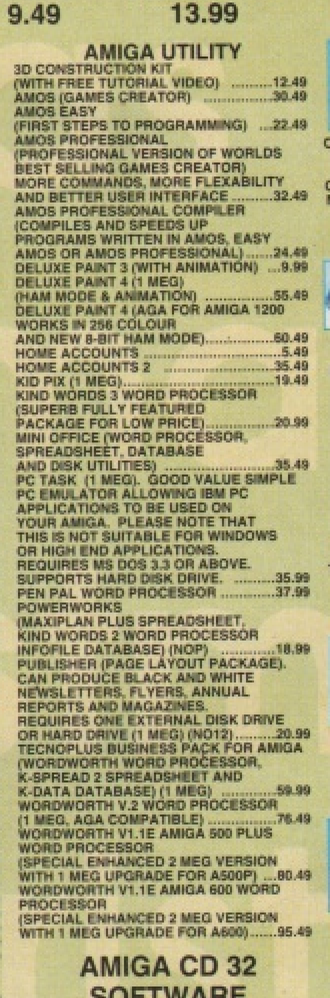


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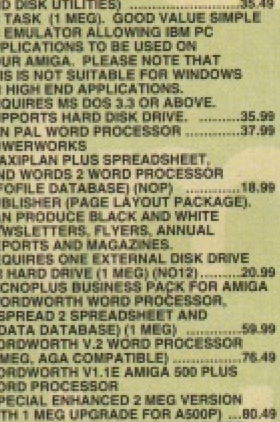


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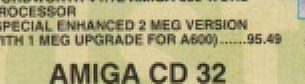
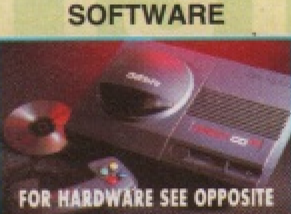




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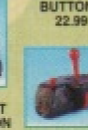
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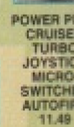
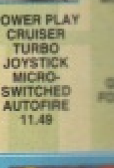
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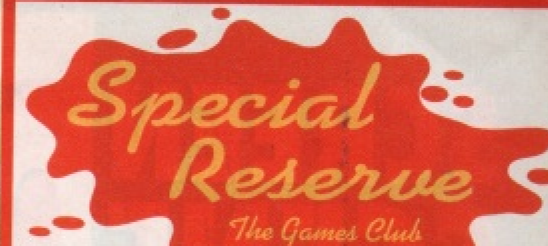
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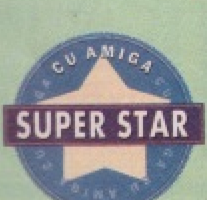
SCREEN SCENE

Phew, it just gets hotter and hotter! It's nice to see software houses are pursuing Amiga excellence into the new year. If you don't believe us, just check out *Brian the Lion* or *Beneath a Steel Sky*.

A CU Screen Star is for games scoring 85%-92%. If a game gets one of these, it'll be of lasting quality and you can rest assured that, if you decide to purchase it, you won't be wasting your money.



93% and a game's worth a Superstar. We hardly throw them around, but if a game gets one it'll be completely outstanding.



FIRST

1994 is on its way, and the Amiga marches on. First Impressions takes an early look at four of next year's releases, and starts to wonder if things are going to be even better in 1994 than they were in 1993.

ALLO ALLO
ALTERNATIVE

THE GAMEPLAY: Based on the appalling TV show of the same name (which, incidentally, starred my old maths teacher as a British airman), you play small cafe owner, Rene, in occupied France as he plots to hide the painting of the fallen Madonna with the big boobies. The TV show is packed full of all the usual situation comedy humour – running jokes, speech impediments and plenty of 'oh crikey' situations, and so is the game. A platform game in essence with just a little bit of problem solving thrown in, it looks a fair bit more challenging than other efforts.

WHAT'S NEW: Not a hell of a lot, really, apart from the fact that the items you collect can be used either as weapons or bribes, depending on who you give them to. Throw a rose at a German guard, and he'll collapse. Throw it at Yvette and she'll hitch up her skirt, freezing all the guards nearby. Whether or not this kind of originality is strictly necessary, or whether it adds to the game remains to be seen.



BEHIND THE SCENES: The game has been coded in-house by the same team that have done, well, all the recent Alternative games, such as *Suburban Commando* and *Huckleberry Hound*. That's it, really.

FIRST IMPRESSIONS: Not too bad, as it goes. Although a fair chunk of Alternative's recent licence attempts have been a little below par, this one looks like it might be the business. Although simply presented (and the title tune is the most awful accordian tune ever heard), there might just be enough of a puzzle element to make it addictive.

UNIVERSE
CORE DESIGN

THE GAMEPLAY: A graphic adventure that revolves around the plight of an ordinary lad who finds himself dragged into another dimension. After playing with his Uncle's invention, Boris gets thrown into a futuristic parallel universe. Once there, he becomes involved in a plot to bring about the downfall of the evil Emperor Neiamisis. *Universe*



IMPRESSIONS

GENESIA

MINDSCAPE



THE GAMEPLAY: This is a tough one to describe. Take *Sim City*, *Sim Farm* and *The Settlers* and mix them with *Populous* and you're somewhere near the mark. *Genesia* is to all intents and purposes a war game from grass roots. Not only do you need to take an army and march them across the moors to battle, you have to actually build a civilisation for them to defend. Oh yeah, add a bit of *Civilisation* while you're at it...

WHAT'S NEW: The recruitment mode. As your settlement grows and you till the land, add buildings and try to build a working economy so travellers through your village may decide to settle. If they do, you can then decide what you actually want them to do, from farming to architecture (designing and erecting the buildings). The entire community can be shuffled around into different jobs at any point, so it's fortunate you have a village populated with such multi-talented people.

BEHIND THE SCENES: *Genesia* has been brought to you by those lovely French people who make up Microids, responsible for possibly the worst motorbike racing games ever. Let's hope that they do a better job of this kind of management game. Incidentally, this is their first product for Mindscape after making the switch from Daze Marketing.

FIRST IMPRESSIONS: *Genesia* looks like it's going to be a very complicated game indeed. WIth hundreds of different statistics to watch, you're going to have your work cut out just trying to keep your colony running, let alone watch out for the opposition. This could be one to watch. Look out for the full review next issue.

was originally intended to be the sequel to *Curse Of Enchantia*, but has grown so much during development that it has simply become a follow up.

WHAT'S NEW: A hell of a lot. There are some 3D rendered animations to keep everything moving along, which is fairly unusual in a graphic adventure. Even stranger are the arcade sequences, such as a full *Outrun*-style car driving section.

Probably the biggest achievement is the SPAC 256 colour system which allows you to view the stunning backdrops in 256 colours on any machine – including non-AGA machines! *[What – Ed.]*

BEHIND THE SCENES: The game has been coded by the same in-house team that came up with *Curse Of Enchantia*, and they have taken the two years experience to add reams of text to the game to pad out the storyline.

FIRST IMPRESSIONS: Very good. The game looks incredible, and what we've seen of the design shows that it's at least every bit as good as *Curse Of Enchantia*. It's nice to see that not everyone is trying to emulate Lucas Arts titles. With it's original sections and absolutely stunning 256-colour emulation, this looks like it could be one of the hottest games of next year.

ROBINSON'S REQUIEM

SILMARILS

THE GAMEPLAY: *Robinson's Requiem* is what is known as a survival simulation. We are talking no ordinary adventure here. You are government agent Robinson, stranded on an alien planet with nothing but a small medical kit and a chest mounted computer for company. From this point, you have to escape from the planet, and the only way to do that is to stay alive. Running over three square miles, you have to stay fit and healthy – and unharmed if possible.

WHAT'S NEW: Just about everything! An enormous game all displayed in true 3D, using a brand new texture mapped polygon graphic system. Objects are lit or shaded according to distance and position, using a garaud shading technique similar to that used in the PC flight sim *Comanche*. All weather and time systems are simulated, as are the functions of the human body. Wow.

BEHIND THE SCENES: What else would you expect from Silmarils? They've taken the *Dungeon Master* style of game as far is it can go with *Ishar 2*, so now they're adding that little bit more freedom. They've been working on this one for quite a while, coding it in tandem with *Ishar 3*.

FIRST IMPRESSIONS: With only still screenshots and a rolling demo to go on, I am very impressed. The amount of effort that has gone into just the graphics, with all sprites rendered in every possible direction in *3D Studio* and the texture mapped terrain it looks fantastic. Some of the polygon animation is staggeringly real, and the idea of such a natural and involving adventure game is making my synapses itch. Roll on February!





It's situations like this that have caused problems for Revolutions. Animations involving two characters have been recoloured by hand.

KING'S QUEST VI

Sierra aren't going to write King's Quest VI. Boo! Revolution Software are doing the conversion for them! Hooray!! Tony Dillon laces up his pixie boots.

The *King's Quest* series will always have a special meaning for computer games fanatics. Widely regarded as the games that put Sierra on the map, the branding became so popular that it paved the way for other popular Sierra series such as *Space Quest* and *Police Quest*. When it comes down to it, though, nothing can beat a good *King's Quest* title. That probably explains why there was such wailing and gnashing of teeth when Sierra finally announced that they had no plans to release an Amiga version of *King's Quest VI*.

From that point, the story in basic form goes something like this: Charles Cecil, bespectacled boss of Revolution Software called Sierra and said: 'We'll do the Amiga conversion for you.' 'Oh, all right,' replied Sierra. Next time you read that development houses are 'in negotiation' or are 'currently speaking to,' you'll know it's all stuff and nonsense.

Anyway, from that point on, Sierra supplied Revolution with the source script for the game, and then it was down to coder Jeremy Sallis to piece the rest of the game together.

Note: I said source script, not source code. Jeremy, who is new to the world of computer games, having spent his career so far working in the aircraft industry (he wouldn't be more specific, so he probably wasn't doing anything exciting like flying an F-15), had to come up with a complete frame for the game, and then feed this script in, which tells the program what to do in specific situations. 'In a lot of ways, it's exactly the same as a text adventure. The only difference here is that we are also controlling the animations,' explained Jez in his usual, succinct way.

In many places, the conversion is nothing more than a straight port. The script itself is text-based, and can be added to any control routine, and all graphics come supplied. Why is it taking so long to actually convert it then? It seems the problems come from the graphics themselves. To begin with, everything is being scanned down to 32-colour mode, and with the backdrops and sprites using separate palettes, this is causing merry hell for all involved. As a result, most of the animation sequences have been stripped to their basic minimums. A winged man who originally had 13 frames of animation, now runs quite smoothly with only six, for example. Where the original had frames that had the character scratching his head, or looking around, the Amiga animation only has him flying, looking dead ahead.

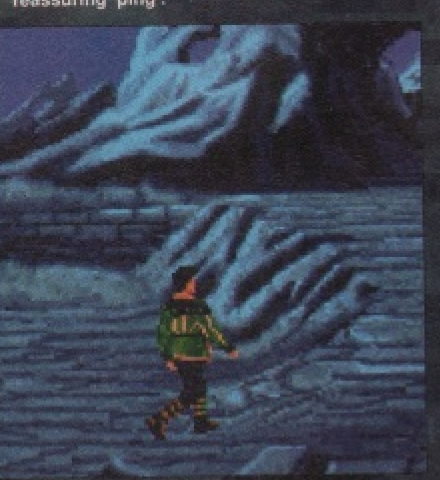
There are all sorts of problems encountered when converting the graphics across. All the short spot animations have to be recoloured by hand – when your character shakes hands with another, for example. At the point where the two sprites meet, both are removed from the screen and a small animated sequence of the two of them shaking hands is played. All these add up to a huge number of sprites, and recolouring is a time-consuming job.

At the end of the day, though, the game looks stunning. Anyone who has played the PC version will already know what a stunning adventure it is, and if these screenshots are anything to go by, the Amiga version will be just as good. Look out for a full review next month. CU



On each of the islands your aim is to get through the castle gates.

Every time you do something right you hear a reassuring 'ping'.



Maze-like paths only lead in eight directions.

EVERYTHING YOU KNOW IS WRONG

It stands to reason that a 32-colour image can never look as good as a 256-colour image, doesn't it? Wrong! If carefully coloured and retouched, a 32-colour image can look every bit as good, as these screenshots here will testify. On one side we have the original PC screenshots and backdrops, and on the other the 32-colour Amiga shots. You have to admit, the difference is minimal, which must give welcome relief to all the non-AGA owners out there. Don't worry guys, you're not going to get forgotten in the stampede!



PROFESSIONAL FOOTBALL MASTERS 4

VERSION

Quite simply the best Football management game for your computer. We have served thousands of satisfied customers during our 4 years of trading. Over 10,000 man hours (during 5 years) has been dedicated to the production of this constantly improving game. It is one of the most realistic and accurate representations of a professional football managers annual challenge to tactically out wit and conquer every opponent.

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League & Cup : Premier 22 teams, Division 1,2 & 3 have 24 teams, Play-offs, Tables. 7 Cup competitions with precise rules (2 legs, extra time, away goal rule, seeded draws, European Cup tables, 5 subs, non-domestic player restrictions etc.), Finalist route to glory.

Games : Yearly fixture/previous list, Week fixtures/results, Results from previous meeting with opponent (goes back up to 6 seasons).

Players : Real life statistics reflecting the start of 93/94 season with real positions, height, age. Live transfer market, Contract & wage negotiations, Preferred foot (left/right/both), Loans, Injuries, Training, Special talents, Trainees, Goalkeepers (separate skill categories), Defenders, Midfielders, Attackers & Utility, Retirements, Foreign transfers, Unhappy players, Top 10 Hot shots.

Team : Training, Tactics (15 different styles), Aggression, Formation allows specific player field settings (Left winger, Sweeper etc.).

Club : Sponsorship, Ground improvements, View opponent, Finances

The Match : Real time scoreboard reporting goals & injuries yellow/red cards, Sound effects, Interventions permitted at any time to change tactics, formations and make subs. Physical graphical penalty participation (optional). Over 80 different referees.

Other : Fast load/save, Printer access, 20 Options to set various game preferences, Instruction book, Easy to play, Technical support.

Plus : Over 100 other meticulous refinements impossible to list here.

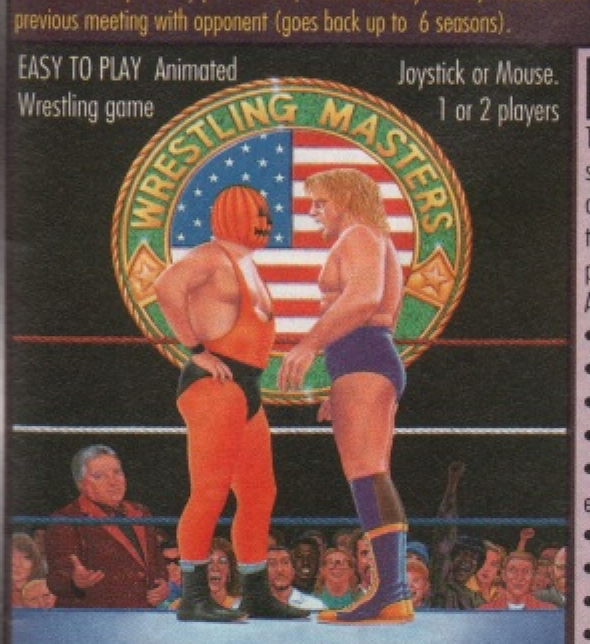
Editor : Allows you to amend various items in saved games. £12 Extra

Scottish : Dedicated version details available upon request.



EASY TO PLAY Animated Wrestling game

Joystick or Mouse. 1 or 2 players

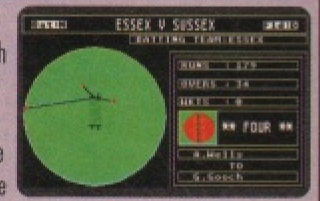


CRICKET MASTERS

This is a purely managerial cricket manager game that concentrates on strategy and includes plenty of relevant statistics. The game has been designed and developed by a true fan of the sport. It replicates everything that a real manager has to contend with and it's a totally unique production that anyone with an interest in Cricket should experience.

A summary of the main features is shown below:-

- AXA EQUITY & LAW 18 league county teams, 50 overs per game.
- 4 Cup competitions including Benson & Hedges, Nat West.
- 20 different match umpires with accurate names and strictness.
- Accurate player details Surname, height and age.
- 27 different player attributes. Most skills have a direct impact on the effectiveness of each individuals actions during a simulated match.
- Easy player selection. All game text is clearly presented.
- Batting and bowling averages. Top batting and bowling tables.
- 3 Different training intensities to boost batting, bowling or fielding.
- Weather, pitch and light often make an impact on ground condition.
- Full match highlights let you watch the action ball by ball with full graphics and/or realistic sampled sound effects for significant events (Fours, Umpire decisions, etc.). Interventions are permitted at any time to change batting tactics or fielding placings.



- 3 Batting/Bowling classifications (Normal, Attack and Defend).
- Choice of 15 different field placings.
- Full scorecard results with best batting and bowling figures.
- Other staff (Physio, Groundkeeper, Scout) can be hired and fired .
- Annual league fixtures listing. Current week and last league results.
- View current cup competition draws and historic records.
- Real time transfer market. Player contract and wage negotiations.
- Sponsors, Printer access, Finances, Poor ground fines, Manager rating.
- 15 Options to alter game preferences, Load/Save game.
- Instruction book with plenty of examples.
- Plus many more fine details that we are unable to list here.

STABLE MASTERS V2

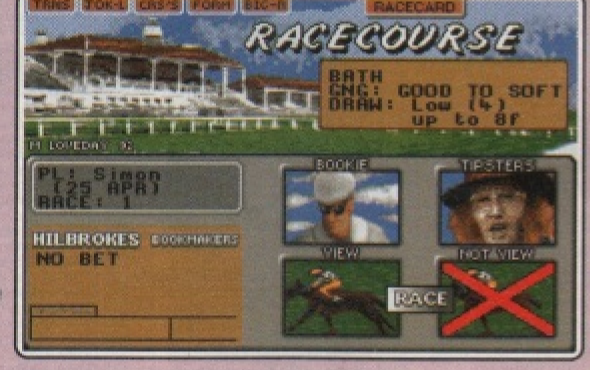
This game has been designed to be as close to real racing as possible. Five years of development by a clever racing expert has led to the second revision of this Flat Horse Racing Simulation.

Up to 4 players can participate as Owner Trainers with the primary objective of becoming the top rated trainer, in respect of prize money won, at the end of each racing season (March to November). There are up to 35 other intelligently controlled computer trainers to compete against and compare your personal performance.

To achieve this aim you must discover a potential champion and train them so that they become capable of competing well and winning any of the 47 big prize money races (Handicap and Group). eg. The Derby

To give you an idea of the tools provided in this game to assist you reaching your objective we have listed the main features below:-

- 250 horses each with over 60 independent variables.
- 26 different race courses (2 all weather), real life characteristics mirroring the diversity of racecourses in the UK (descriptions provided).



- 20 Jockeys who vary in ability and booking fees, Orders & Feedback.
- Formbook and Win Summary Cards cover the previous 200 races.
- Animated race display or just the result. View Declaration List for races.
- Very informative report by Head stable lad. Tipsters. Bookmakers.
- Racecards similar to racing press. Real life. Handicaps & Race Types.
- Viruses, Injuries & Vets. Load/Save game. Many other items included.

Version 1 is available upon request (Simple training & betting) @ £15.

ORACLE

You could have won £44,836 with this HORSE TIPSTER Utility.

Open National Tipping Competition 1991 : Organised by Racecall, regulated by the Tote, this program achieved joint second. This led to a serious approach from a well known national book maker. Rejected in favour of supporting the public.

Winnings Statistics : 104 wins out of 166, as from 2/6 to 1/9/93.

Formula : This program tells you exactly what to do. You are NOT permitted to amend our system unlike so many other similar programs. How confident can you be in something that invites amendments!

Research & Development : Three years full time race analysis and experimentation to refine and test the prediction system.

Inside Knowledge : Plenty of unique hints from contacts in the know.

User Friendly : No racing knowledge required, easy to use, tutorial book.

Restricted Sales : As soon as our programs predictions have a prolific impact on the betting odds we will stop accepting new buyers.

Monthly Updates : Highly recommended option. If any update fails to break even we'll send the next one free of charge. From £25.

Price Increase : Highly likely. Buy now before success forces increase.

World Cup Cricket Masters

A fantastic graphical and/or tactical representation of Cricket that has been completely written by a traditional fan. You can physically participate with batting and/or bowling or leave it to the computer to automatically handle. See full feature list below :-

GAME OPTIONS

- 1 Day limited overs or test.
- White or coloured clothing.
- Three Cricket grounds.
- Load/Save game. Skill levels.
- Computer/Human players.

ANIMATED ACTION

- Sound Commentary.
- Umpire signals.
- All the strokes cut, pull, drive, etc.
- Appeals, dropped catches, run outs.
- Bouncers, wides and no balls.

STATISTICS

- Scorecard & bowling analysis.
- Weather and ground reports
- Wagon Wheel
- Manhattan Chart.

PLAYER VARIETY

- Rated on 8 adjustable factors.
- Left and right handed players.
- Range of batting types.
- Editor to amend game stats.
- Bowler types include seam, swing, change and both types of spin with 8 speed levels.

FRIENDLY CONTROLS

- Icon driven with point & click.
- Large 3D scrolling screen covering the entire playing area.
- Mouse controls bowler's line, length, direction field settings.
- Joystick control of batsman's attack level, strokes and running between wickets.

VARIABLE CONDITIONS

- Surface and pace of pitch
- Rain, bad light, cloud cover, temperature and humidity.

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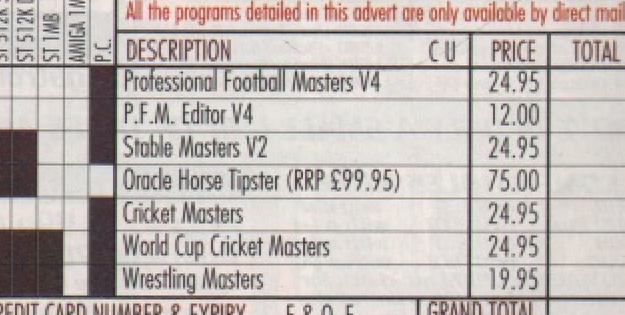
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					P.F.M. Editor V4	12.00	
					Stable Masters V2	24.95	
					Oracle Horse Tipster (RRP £99.95)	75.00	
					Cricket Masters	24.95	
					World Cup Cricket Masters	24.95	
					Wrestling Masters	19.95	

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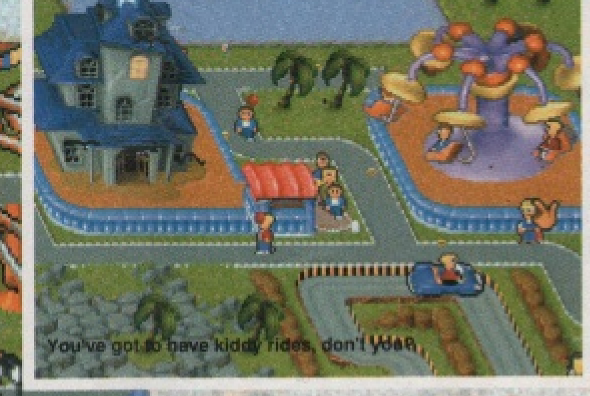
POSTCODE

THEME PARK

Roll up, roll up for all the fun of the fair and a course in business management thrown in for good measure. Tony Dillon goes for a roller-coaster ride on Bullfrog's latest simulation...

Don't put food stalls near rides like this one.


Fountains just make the park more attractive.


You've got to have kiddy rides, don't you?


Everyone in the park has their own preferences.

IN THE BEGINNING

It's 1983 and a struggling young games designer has just released his first commercial computer game, *The Entrepreneur*. Unfortunately, the market for business management simulations is not a big one, and the title flops badly.

Ten years later and that self-same games designer, Peter Molyneux, is head honcho at one of the world's premier games development teams, Bullfrog. Responsible for coding such blockbuster games as *Populous* and *Syndicate*, Pete can now afford to have a chuckle about his early efforts to crack the big time of home computer entertainment.

'It was a frustrating time,' admits Pete. 'I'd come up with what I thought was a really interesting business management sim and the game was met with complete indifference.'

Over the years, Pete found himself coming back again and again to his first commercial effort, constantly mulling over where he went wrong and thinking of ways to improve the design. 'I kept wondering how we could improve it, build on it so it would be a more attractive game.'

Finally, after years of deliberation, Pete hit on the idea of adapting *The Entrepreneur* to a theme park setting. 'Running a theme park seemed to be the ideal solution. It was then I realised that a simulation of a theme park is an incredibly fun thing to do. There are millions of things you can do with it. Obviously we've gone more for the simulation than the business side, but underneath it all there's a really firm business simulation.'

Intrigued? You should be. *Theme Park* is shaping up to be the new *Populous*. If you're wondering what it's all about (as if you can't already guess), let Pete fill you in on the background: 'The bottom line is you get to design and run your own theme park. That is what the game is all about. Your great aunt or someone has left you this great sum of money, on the provision that you use it to create a theme park empire.'

DESIGNS ON SUCCESS

As you can see from the shots on this page, a lot of time has been spent making *Theme Park* look super slick. Not as much time, however, as has gone into the design. 'Once you've got your piece of land, which you've rented off the government, you can then start to set about building your theme park,' explains Pete.

When setting up a park you can lay down paths, buy rides and shops, even trees and lakes. You set it out how you like, and then you open your park. The public will either love it or hate it.

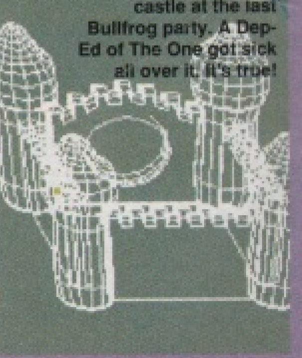
It doesn't stop there, though. That's where the simulation really start to kick in. All the little people who enter the park – and there are hundreds and hundreds of them – get hungry or thirsty, and they all have preferences for certain rides. As your theme park develops, it gets a reputation. Say you have a park that has a lot of rides that break down, or it has a lot of litter, it will get a reputation for being a 'bad boys' theme park, so the quality of the people that are attracted to it will change. Initially you'll notice these happy families coming to the park, but as the game goes on, thugs start coming in and beating up your entertainers. You have to find the ideal theme park that suits the average family, the 2.2 children family.

As always, Bullfrog are trying something new. 'The key thing we've gone for is to make it fun, and everything understandable. If you're not making any money, then there's a really good reason. Your bank manager will come up and start telling you off, but at least you'll know why. That's the difference between one of our games and one of Maxis' games. They try to go for the ultimate accurate simulation, and sometimes it's not as fun as it should be. We have that accurate simulation in there, but we try to make the game as fun as possible. After all, it is a game. We're not doing it to win any awards for simulation of the year, or whatever. We just want to write a good game.' Definitely one to watch, methinks. CU

HEAVY CONSTRUCTION

All the rides in the park are rendered 3D objects.





There was a bouncy castle at the last Bullfrog party. A Dep-Ed of The One got sick all over it. It's true!



THE NEW STANDARD IN AMIGA PAINT AND ANIMATION IN MILLIONS OF COLOURS.

Brilliance is now – leaving DPaint trailing in its wake – the best art package available for the Amiga. It's very hard to express why I'm so taken by Brilliance, there's just a feeling of 'rightness' about the way it works."

CU Amiga,
October 1993 (UK)

"Brilliance is user friendly, doing an excellent job with nearly every function and option that it offers, and the interface is well planned and highly functional."

AmigaWorld,
December 1993 (USA)

"The program is so fast and flexible that it makes its Amiga predecessors feel like the old Doodle! program on the Commodore 64. Nothing out there can match its feature set, and it's the one paint program I've used that's so fast that it never gets in the way of your creativity."

Amiga Computing,
October 1993 (UK)

"It is solid as a rock. Never have I known a first version of any program stand up like this or be so perfectly polished."

Amiga Shopper,
December 1993 (UK)

"It took a while, but DeluxePaint IV has finally met its match. If you're looking for the best AGA paint program on the Amiga, look no further than Brilliance."

Amazing Computing,
November 1993 (USA)

"After using Brilliance for just a couple of days, I'm hooked. It is the only package to be released for the Amiga which can rival DeluxePaint for animation capabilities, and it is a class act."

Amiga Down Under,
Nov/Dec 1993 (New Zealand)

"Excellent! Brilliance is loaded with useful drawing and animation features, but it's not just the sheer number of tools on offer that impresses. Two other big points arise. First, the program is very easy to use, thanks to its intuitive, flexible and well thought-out panel system. The second major factor is Brilliance's speed. Even in HAM-8 mode, everything zips along beautifully quickly."

Amiga Format,
October 1995

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DIGITAL
CREATIONS

BENEATH A STEEL SKY



Lure of the Temptress was an experiment in creating a realistic adventure environment. Revolution's _Beneath A Steel Sky_ takes Virtual Theatre that little bit further. Tony Dillon checks it out .

In a gaming universe where many genres have gone just about as far as they feasibly can with the technology they have, it's rare to find a field that keeps growing and growing. Flight simulations are taking small steps all the time, as are platform titles and even the odd shoot 'em up, but nowhere is as much energy and excitement being thrown about as the graphic adventure market. It's hard to guess what makes them so playable and so popular: the graphics? The complexity of the puzzles? The number of icons you have to play with? Whatever it is, no-one can deny that there's nothing like a good graphic adventure to stop you from actually interacting with the rest of the human race for a week or two. Possibly one of the most important advances for the graphic adventure was Revolution's *Lure of the Temptress*. A challenging and involving game, it's strongest feature was the implementation of the (then) new Virtual Theatre game system. A virtual play tries to create a realistic backdrop to a game, where locations connect sensibly and everything is believable. That is not its strong point, though.

The selling point comes from the characters in the game. In a virtual play, everyone has something to do. They live somewhere, they go to work, or shop. They interact with each other, whether or not you are actually there. If you followed someone around, they would perform the tasks they would normally do in a day, talk to other people, not talk to the rest, have arguments or friendly conversations and generally live out a day to day existence. It's quite something in practice, as you no longer feel you are playing a game where the world revolves around you. A blow for the old ego, maybe, but infinitely more realistic, and by extension, more involving.

VIRTUALLY AN OUTLAW

The Virtual Theatre system has been dramatically updated for *Beneath A Steel Sky*, the second outing for Virgin Games and the results are outstanding to say the least. In case you aren't familiar, the game tells the story of a young man, orphaned and abandoned outside a giant metropolis, and brought up by a group of savages living in an area of desolation known as The Gap. All is well until one day security officers come from the city to take him back. The helicopter they are travelling in crashes, and he escapes into the urban jungle. This

Spend your time in bars and cafes...

...a long way from crawling around in warehouses.

The walkways give an impressive view of the city below.

Dave Gibbons' stunning comic art provides the backdrop.



Lamb, one of the bosses, looks bored in his flat.

Virtual Theatre makes for all kinds of personalities – depressives, for example

All conversation is shown as text.

is only the beginning.

You are this man, lost in a *Blade Runner* background, with security hunting high and low for you. You have no money, no tools and no knowledge of what you have to do, apart from the fact that you have to get out of the city and back to The Gap as quickly as possible. The only real problem there is that you – for some unknown reason – have become enemy number one.

So we roll into the kind of adventure I really like to play. The kind of game where you have no idea what you are meant to do, and just hope you are performing the right moves to make the story unfold properly. As in good thrillers, you are kept guessing right to the end, gradually being fed small pieces of information as you go along. For example, at the start of the game you are mistaken for a guy called Overmann. Who is he? Why do the police so badly want to catch him? All these questions, and many more, will be answered at the end of the game.

YOU'RE NOT ALONE

Life would be really tough if you were left abandoned on your own. Thankfully you aren't. Hidden in one of the pockets of your rather snazzy Ministry-style coat is a circuit board which holds the personality and brain of your lifetime companion, a droid called Joey. Joey lost his robot shell in the crash, but luckily you had enough presence of mind to take his controlling board. Once you find a shell for him, you can get him on his feet /tracks /wheels /whatever and then get him to help you out with some of the trickier puzzles in the game. Watch out, though, as Joey has a very strong personality of his own, which will conflict with yours occasionally.

You may wonder how it adds to the game. If you've ever played *Planetfall* or *Stationfall* and are familiar with Floyd the Droid, then you'll know just how humorous a conversational robot can be. A tin can with feelings paves the way for plenty of moments that, while not exactly gut-busting, should bring a smile to anyone's face.

The whole game is darkly funny, if you can laugh at a fugitive from the law, that is. All the way through, just like *Day of the Tentacle*, there are set pieces that happen that really draw you into the game. At one point you need to get Joey to jump start another robot. He gears up to do this, but asks you to look away as he finds it embarrassing. A probe then extends from the top of his head, and thrusts in and out of what can only be described as the other robot's posterior until the other robot starts moving. It has to be seen to be fully appreciated, believe me.

The other key to the game's charm is the variety of characters you can meet. Many are based on people known to Revolution, although I wouldn't like to name any names. Hobbins is a stereotypical caretaker, happy to be left tinkering but will kick up a stink if you so much as look at a piece of machinery in the wrong way. Lamb is the boss of the building, and throws his weight around whenever he gets the chance. You have two police desk-jockeys, apathetic in the extreme and bureaucratic to the point where »

COMIC CRAZY

Anyone who has ever picked up a comic will know that Dave Gibbons is one of the finest comic artists in the world. They will also be fairly excited to know that, not only did Dave contribute quite a lot to the graphics in the game (backdrops and character sketches), he has also produced a full-colour, eight-page comic explaining the backdrop to the game, right up to the point where the helicopter goes into a spin over the city, which is where the intro sequence takes over. A veritable masterpiece of comic art, this freebie is very limited, and will doubtless become a collector's item in years to come. It's practically worth getting it just for that!

THE ADULT CHANNEL

One thing that will surprise a lot of people about this game is the amount of what I will term 'adult content'. Where other graphic adventures rely on slapstick and generous dollops of the simpler brands of US humour to get people laughing, *Beneath A Steel Sky* contains some bad language, huge amounts of wit, satire, sarcasm and a more than fair smattering of double entendres. There are also one or two gory moments to be seen: when a guard gets shot in two by a laser cannon his legs drop to the floor, and his upper torso slides along the ground, steaming slightly. Yuck!

» they actually have to do some work. These and many others are just waiting to help you out, slow you down or mow you down, depending on how you deal with them.

Of course, if you're going to have that many puzzles, then you need a fairly large environment to put them all in, and *Beneath A Steel Sky* is huge. With almost a hundred different screens, most of which you return to more than once, there sure is a hell of a lot to be done. Unlike certain other games, *Steel Sky* doesn't have you wandering through dozens of screens doing nothing. There is generally at least one puzzle on every screen, and the game is designed so that it is almost impossible to die or fail. The puzzles need to be completed in order, as you usually can't progress very far if you miss something. This means you won't end up on the final section and discover that the laser welder you didn't think you needed thirty screens ago is actually very important. If you've missed something, chances are it's only a couple of screens away.

Most of the puzzles are formed from the phrase 'Use [name] on [name]'. This might sound a little simple, but thanks to puzzles being multi-layered, and the ability to use the same object more than once, you can have a hard time just figuring out what to use.

PICK UP JOINT

The control method in *Steel Sky* is so simple that Revolution can finally lay claim to having created the ultimate in intuitive control methods. The left mouse button selects an object to look at, and the right mouse button selects an object to use. To look at a door, you click with the left, and to open it you click with the right. You don't need to tell the program that you want to open it – it knows that the only thing you can really do with a door when you want to go through is open it. In much the same way that the only thing you can do with a closed window is look through it. In places where something has no real use, the main character will pick it up and stuff it in his coat. From this point, moving the mouse to the top of the screen will call up the inventory, and the same mouse controls apply, although using an object from the inventory will require you selecting something to use it on. What could be simpler?

The graphics in the game are simply stunning. There is no other way to describe them. Hand-painted backdrops, scanned in and retouched, stop it from looking like a run-of-the-mill adventure, and the use of exceptional detail make the smallest, dullest rooms interesting to search. Small ceiling-fans rotate and, in the far distance, cars travel along the highways.

Every character has a whole range of moves and expressions, which along with the personality generated through conversation, gives them depth and makes them all the more believable.

So what's it actually like to play? A lot of fun, to be honest. The puzzles are logical without being too obvious, and the control method means that you can get into it immediately. There is enough challenge to keep even the most ardent adventurer going, while beginners will work through it without straining too hard. There is a really nice learning curve to the game making it taxing without being frustrating.

There are always enough clues to help you figure out problems, but that isn't to say the game is easy. After a few hours play I had managed to work through the first sixth of the game, but the speed I was progressing was definitely slowing towards the end. No doubt by the time this review is printed, I will have finished the game, but only because it's so much fun to play that I can't think of playing anything else in its field.

Beneath A Steel Sky also features one important aspect that I find sadly lacking in a lot of adventures. It's extremely addictive. You always want to know what someone will say to you next, or what the next problem is going to be.

A genuinely enjoyable experience, and one where there are so many different ways to play it, I can definitely see myself returning to this one after I've completed it, just to find out what I've missed. Simply one of the best adventures ever released on the Amiga.

Reich seems pretty CUT UP about it!

The outside world is a maze.

Weren't you told? ROUTINE INSPECTION.

Your character is as slick as they come.

Some people have the strangest idea of tasteful decorations.

People hold conversations regardless of whether you are there or not.

He CRASHED a CHOPPER and ESCAPED!

EXPLOSIONS! GUNS! DEATH! Exciting, isn't it? Bet you wish you had a copy?!

BUT, NEXT THING, ALL HELL LET LOOSE ANYWAY--

KWHUMPH!

RUN, FOSTER! RUN! HIDE FROM THE EVIL!



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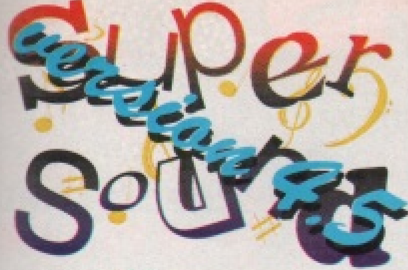
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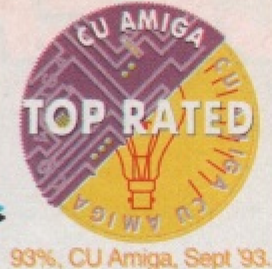
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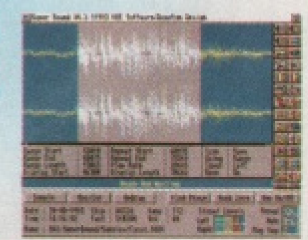
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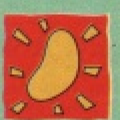
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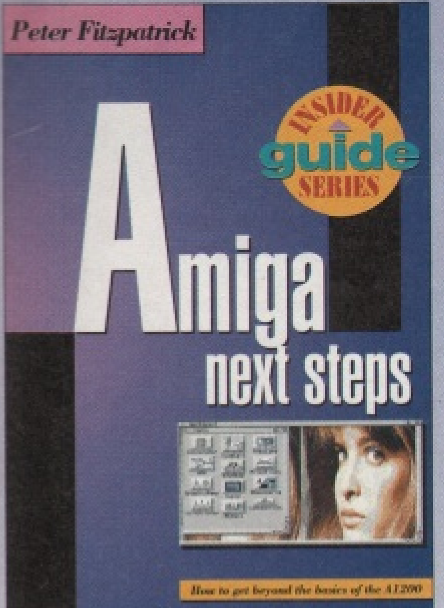
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BRIAN THE LION

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Brian loves to wear his heart on his sleeve. Just look at that expression.

I have to say, I've been quite excited about this one for quite a while. It's about time someone sat up and proved that the Amiga is more than a match for the consoles of the world, and this is the title that beats them at their own game. *Brian the Lion* is a platform game like no other on the Amiga. It would honestly look more at home on a Super Nintendo, thanks to some revolutionary new graphic techniques. Whether or not that's a good thing is down to your own personal preference, but the facts are there to see. Custom chips or not, the Amiga can do anything the SNES can do and, in a lot of cases here, do it far better.

Like all platform games, the aim is to get from one end to the other. I could pad out a bit here and give you the plot, but you've heard it all before. The key thing to note is that your only aim is to get to the end of each level. You can collect power-ups and jewels if you want to, but you don't actually have to.

Visually, the game is quite something. Although in a still screenshot, it looks like most other cute platformers, you notice the amount of effort that's gone in when you see the thing moving. Brian has over a hundred frames of animation to himself, including things like looking up with a daunted look on his face when he reaches a cliff he can't jump up, and a wonderful roar facility. Holding down the fire button makes him breathe in, and releasing it lets out a roar. The longer he breathes, the stronger the shout. The amusing thing is, if he lets out a really loud roar, he startles himself and stands their quivering for a moment!

Very playable and very colourful, *Brian* is probably the best-written platform game ever. With more tricks and stunts than most similar games, it's the kind of game you must have in your collection, even if it's just to annoy your console-owning friends.

Tony Dillon **86%**



You need to utilise part of the backdrop in order to progress.



Top At the end of the first level, the only way to get off the island is to climb aboard the catapult.



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That green sparkly ray gives you a special power. It'll take it away, too.

The game plays like a cross between *Lemmings* and *Morph*. Your little Tiny has four different incarnations. One allows him to shoot fireballs, one gives him Spiderman-like swinging abilities, one lets him breathe under water and the last allows him to eat through the scenery. Each level is packed full of traps and enemy sprites, and you have to use a variety of skills to get through.

I really am enjoying this one. It's beautifully animated, wonderfully presented and quite addictive. The movement of the characters is smooth and effective, with bags of personality. There are even a couple of flashy effects, like the screen swirling around and fading into nothing when you complete a level. The only downside is that some people might find it a little slow. It takes at least a second to get moving, and another second if you want to stop. There's a bit of a lag on the joystick control, which means you have to be thinking ahead of yourself. After a couple of goes, though, the controls become so instinctive that it stops being a handicap and the game becomes really enjoyable.

The most fun one to control has to be the Green Swinger. Wee!

Tony Dillon **81%**



Not quite a purple people eater, more a small, round red rock biter. Mean little thing, isn't he?

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Amie
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'War has never been so much fun,' or so the song goes. Jon Sloan dons fatigues to join the chorus line for Virgin's latest bloodfest.



MASS DESTRUCTION

War wouldn't be war without a selection of powerful weapons capable of mass destruction. *Cannon Fodder* is no different, there's enough firepower in there to stock the arsenal of a small South American dictator.

Your insertion team starts each scenario with an unlimited supply of bullets but, depending on the plot, there's the opportunity to pick up much bigger guns!

GRENADES – Your basic shred-the-enemy-with-small-bits-of-shrapnel devices. Their range is limited, but they can be thrown over obstacles to hit their targets. Very useful for a sneak attack.

ROCKETS – These bazooka shells are great for long range attacks. Best used against buildings or enemy soldiers similarly equipped. A great tactic is to dash out from cover, let one off, then dash back under cover to watch the fireworks from a safe distance.

HEAT SEEKERS – More long range devastation can be achieved with these than almost any other weapon. Brilliant against enemy vehicles.

JEEP – Fast, manoeuvrable and fun. Use it for quick attacks. Mounted with an on board cannon you can shoot the other guys or, better yet, just run them down. Remember kids – don't try this in daddy's Range Rover!

SKIDOO – One snowy scenario sees the team stuck in a maze-like forest with the only way out over a series of ice ramps. Evil Knieval look out!

TANK – Tough but not indestructible. Some enemy bunkers are so armour plated that only a shell delivered from one of these will penetrate it. The sounds of soldiers squished beneath the tracks are *so* sick.

HELICOPTER – If you feel you're above all this violence, you can be, literally, with the 'copter. Flying above the action means you can strafe the ground yet be immune to most returning fire, except the rockets and heat seekers.

I can't camouflage my feelings about this game. I've just got to shoot my mouth off. *Cannon Fodder* is the best thing since gunpowder. It's bloody brilliant. It's better than sex. But, that's enough adulation *[And bad war puns – Ed.]* for now. So, what's it about? Simply put: shooting, shooting, more shooting and, just for a change, a few explosions. That's it. No fancy storylines. No deep and meaningful scenarios. Just grab a handful of recruits, drop them in a war zone and then blast everything in sight.



You can call up a map at any time. It's not terrifically detailed, but it does give you some idea where the huts and bunkers are.

WEIGHT WATCHERS

Weighing in at three disks, *Cannon Fodder* is a hefty game indeed. There are 24 missions awaiting your soldiers, each with between one and six phases. In total you'll have to wade your way through 72 scenarios, each one progressively harder than the last. The early operations involve sending the team on a straight 'shoot everything in sight' assignment. Later on, though, they'll have to rescue hostages, protect civilians and kidnap opposing soldiers. When you realise that one stray bullet, from either side, hitting a civilian is all it takes to lose the phase, you'll see just how tough the game is. To crank up the challenge element you only have 15 raw recruits per mission. And, as you're guaranteed to lose a good number the first time you try the mission, even experienced players are going to take a couple of weeks to complete the game. Believe me, by the time you reach the seventh mission you'll be cursing your lack of mouse control. I played it with a 400DPI mouse and still got wasted!

Speaking of controls, even a complete mouse-a-phobic could get to grips with these. Just point the mouse where you want to go, left click and off the men will trot. Right click and they'll shoot at that point. Bullets are unlimited but there's also a fixed amount of secondary weapons. Firing them is easy too. Right click on the target and then left click at the same time to release one. It's tempting to let rip with all your weapons early on, but that would be a waste. And some missions need you to carefully control your resources.

For instance, one objective could be that you have to blow up all the enemy's huts. This is not possible with bullets alone.

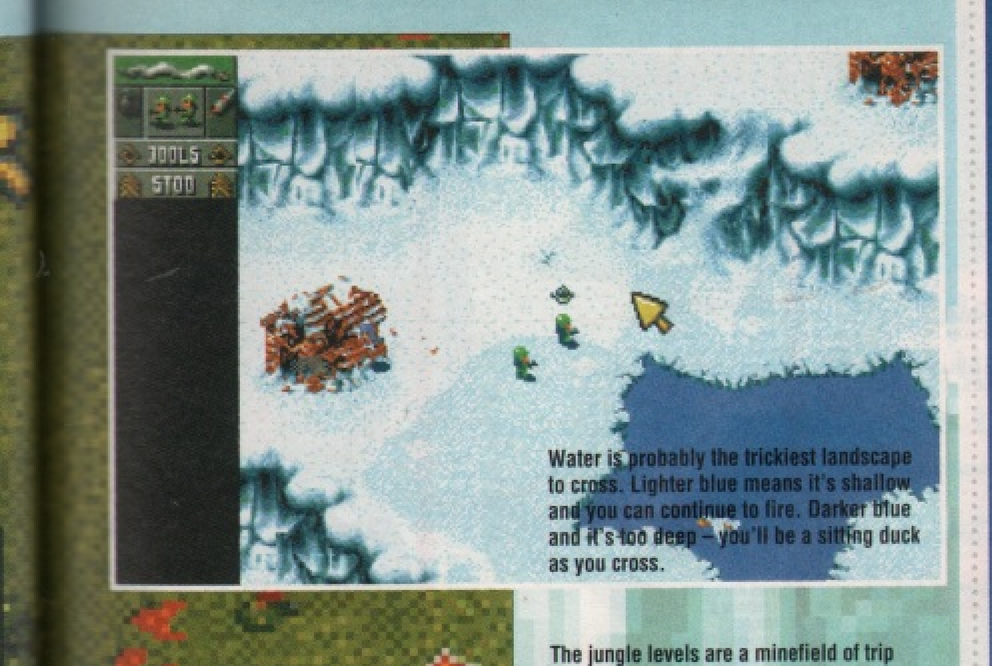
Later enemy bases are heavily fortified. The only way you can take them out is with a tank or a shell from a fixed gun emplacement.



Buildings blow up with surprising regularity whenever I play *Cannon Fodder*. Perhaps it's something to do with the fact that I keep throwing grenades at them.

GORE BLIMEY!

You don't get to choose the size of your squad in each phase, that's done automatically. It's not a problem though 'cos the Sensi boys have



Water is probably the trickiest landscape to cross. Lighter blue means it's shallow and you can continue to fire. Darker blue and it's too deep – you'll be a sitting duck as you cross.

The jungle levels are a minefield of trip wires and sharp spikes. Watch where you walk or you may end up with a spike right up the bum!

pitched the difficulty curve just right. You'll have just enough men to complete that part, even if you lose a couple. But it's best not to sacrifice troops needlessly as they increase in rank with each successful mission.

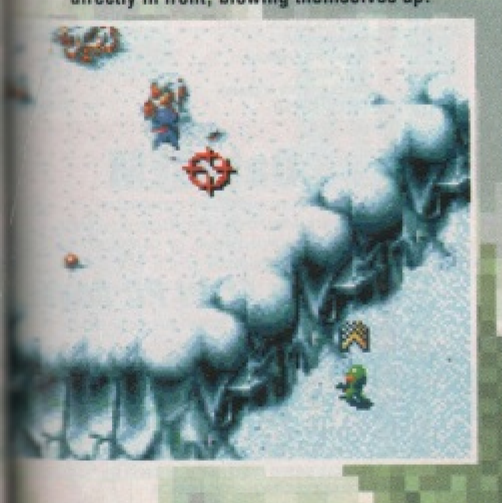
CRIMSON ARC

From the very first moment you load *Cannon Fodder* you know that you're in for a treat. The intro music and slideshow is one of the best I've seen. Normally I skip through intros. But, Sensi's version of 'War... has never been so much fun' captivated me – it's a brilliant, toe-tapping tune. The attention to sonic detail has been carried over into the main game with both music and sound effects perfectly scored. It's the simple touches, like the way that sounds get louder the closer you are to the source, that make it. On the graphic front there's no innovation but plenty of good solid Amiga art. There's loads of variety in the landscape types – jungle, ice, desert, moors and underground caverns – and the sprites' animation is very detailed considering how small they are. I love this game. It has its faults, like the lack of order options. But on the whole it's a very playable, very tough shoot 'em up. Be warned though, you'll need to have your sick sense of humour head on to enjoy the puns. Many development teams, if they're lucky, go through a golden phase and the Sensi boys are right in the middle of theirs just now. Can they do no wrong? Not as far as *Cannon Fodder* goes anyway.

INSTANT PROMOTION

Hidden in certain locations on specific missions are special Sensible icons. If you find one of these your dreams will come true. Well, not quite. However, they do power up your troops. Grabbing one will do a variety of things from giving the men instant General rank (with better firepower, etc.) to granting invincibility for a short time. Basically, look carefully around each level. Some icons are just lying around, others are hidden behind background scenery. Good luck!

The enemy can be very stupid. Some bazooka men hide behind rocks and other scenery. As they fire as soon as they see you, you can cause them to blast the rock directly in front, blowing themselves up.



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RELEASE DATE:	END DECEMBER
GENRE:	SHOOT 'EM UP
TEAM:	SENSIBLE SOFTWARE
CONTROLS:	MOUSE
NUMBER OF DISKS:	3
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	NO
MEMORY:	1Mb

GRAPHICS	90%
SOUND	92%
LASTABILITY	96%
PLAYABILITY	97%

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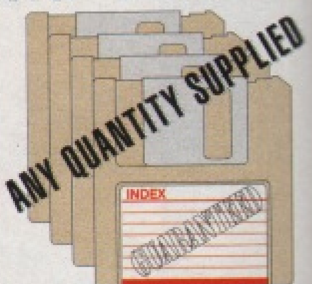


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ZOOL 2

The ninja that doesn't resemble an ant is back. And this time he's brought a friend Jon Sloan joins the party.

It wouldn't be a platform game without hidden rooms. Blow certain blocks away and you'll discover rooms chock full of Chupa Chups' lollys and logos.

The problem with introducing sequels to games is that people tend to expect part 2 to be better than the original. I mean, with all the lessons of the last game learnt, you'd think that some improvements should be made to the gameplay, graphics, sound et al. But with a game as good as *Zool* you've got a pretty tough act to follow. So you'd be lucky to reach the lofty heights scaled by that top platformer. Unfortunately, Gremlin seem to have fallen well short of that peak.

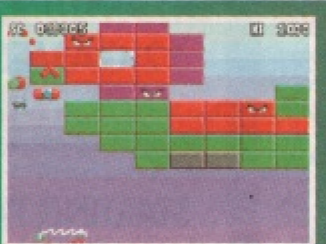
SEQUEL MANIA

This sequel once more stars Zool, the Ninja from the Nth Dimension; only this time he's brought along Zooz, a female Ninja. The idea's just the same as the original with you (playing Zool or Zooz) leaping about six huge levels in an attempt to catch up with Mental Block, an agent of the mysterious Krool who's intent on wrecking the equilibrium of the Nth Dimension. Yes, I know it's a load of pooh but somebody's got to write that kind of thing. Anyway, each level has its own specific theme ranging from Swan Lake through Bulberry Hill to The Crazy House. So, with each level you get a whole new graphic set and a completely different group of baddies, each one tied in with the background graphics. For instance, Bulberry Hill is populated by flying light bulbs and light beam shooting desk lamps whilst Swan Lake is full of dive bombing birds and aggressive half-hatched chicks. It's a great way of keeping your interest peaked as each nastie demands a different means of attack and defence. It's no good blasting your way through the level bouncing on every enemy you meet as *Zool* will quickly run out of energy (mind you it is good fun!).

Below: Level two and *Zool*'s onto Bulberry Hill. Apart from psychotic snake-like torches watch out for the loony Anglepoise lamps.

GREAT EXPECTATIONS

Expectations were running high in the office when we received this. In fact we had to fight over who would get the review. Sadly, after loading it up, I wished I'd lost that scrap. The whole thing screams of being rushed out in time for Christmas. The graphics – something that *Zool 1* was highly praised for – seem dull and lifeless by comparison. It's as though they were sketched by an art expert only to be coloured in by a ten-year-old with less than a basic grasp of composition. The gameplay too, whilst competent lacks even a 10th of the sparkle that made the original so addictive. Possibly the only redeeming feature that could pull this game from the murky depths of mediocrity is the music. There's an eclectic range of tunes available – listen out for the mellow tones on level two. Overall, *Zool 2* is a let down. The best that can be said is that it's a stunningly average platformer. CU



DOUBLE DOG

As well as Zooz, Zool's brought along his dog Zoon [Query: is everyone called Zoo(something) in the Nth Dimension? It must be a pretty boring place – Ed.]. *This two-headed mutt gets to play a role in Mental Block's downfall by starring in his own sub-game. To enter it you need to collect three Zoon tokens which are hidden about each level. Grab enough and, at the end of that section, you'll be zoomed off to Zoon's game. No points for innovation I'm afraid as it's simply another* Breakout *clone. Guide Zoon left and right to keep a ball bouncing up destroying the coloured blocks above him. Every now and then a bonus falls to the floor which Zoon can collect to help Zool/Zooz in the next level.*

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RELEASE DATE:	END NOVEMBER
GENRE:	PLATFORM
TEAM:	IN HOUSE
CONTROLS:	JOYSTICK
NUMBER OF DISKS:	2
NUMBER OF PLAYERS:	2
HARD DISK INSTALLABLE:	NO
MEMORY:	1Mb

GRAPHICS	70%
SOUND	83%
LASTABILITY	75%
PLAYABILITY	78%

"A slightly disappointing sequel to the Amiga's top platformer."

OVERALL 76%





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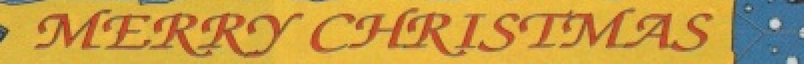
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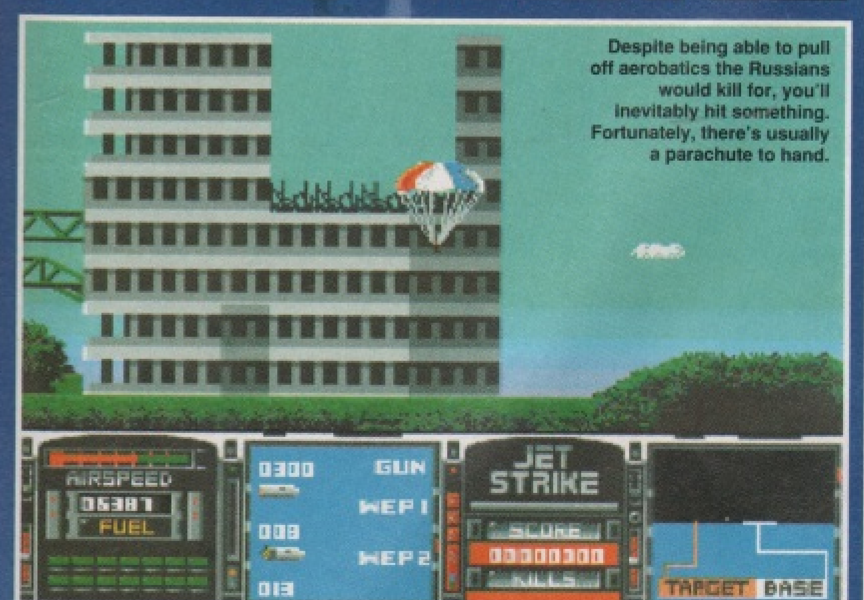








JETSTRIKE



Despite being able to pull off aerobatics the Russians would kill for, you'll inevitably hit something. Fortunately, there's usually a parachute to hand.

ALTERNATIVE OUT NOW £25.99

More a flight game than a flight sim, *Jetstrike* takes an unusual side-on scrolling view to depict the action. It sets the player up as an ace fighter pilot working for an elite task force whose aim is to rid the world of S.P.U.D.D. (The Society of Particularly Undesirable Dastardly Dudes). S.P.U.D.D. wants world domination and you're the only one standing in their way. So, the plan is that you carry out a series of strike missions against S.P.U.D.D. bases. You have a selection of aircraft at your disposal ranging from small Wessex helicopters to super fast SU-27 Flankers. The missions vary from rescuing spies to blowing up radar stations – all in the name of peace.

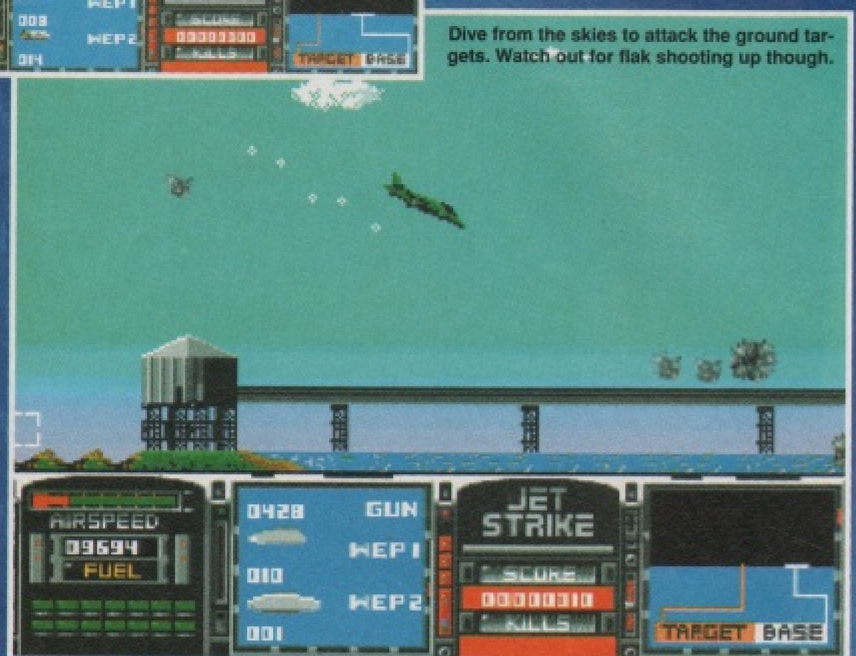
Jetstrike is a funny old game. The control system is quirky in the extreme. For instance, when you're flying right to left you climb by pulling down, but travelling left to right the controls are reversed. So, in the middle of a dogfight you can find yourself heading for the ground at an enormous rate simply by rotating too far. Very confusing. As for the graphics, well they belong firmly in a PD game – not in a £25-plus product. Criticism aside for a second, *Jetstrike* is actually quite fun to play. If you grab a mate and try the Aerolympics option (i.e. you take turns to fly through a devious course of balloon gates, etc.) you'll find yourself soon dragged into the action. The problem is it just isn't worth £25.99. Had it been released at a budget price then I would heartily recommend you buy it and the score would reflect this. As it is, though, don't bother.

Jon Sloan

50%

Look out, low flying building ahead! Don't try to hug the ground too much or you may end up denting the shiny new plane.

Watch out for any low-flying buildings.



Dive from the skies to attack the ground targets. Watch out for flak shooting up though.



Some levels contain secret hidden icons which, once revealed and collected, will warp you to the end of the level.

MAGIC BOY

EMPIRE SOFTWARE OUT NOW £25.99

Frantic, frustrating and fun are three words I could use to describe *Magic Boy*, Empire's new platform puzzler.

The aim of the game is to help Hewlett the wizard's apprentice recapture the magical creatures he's accidentally released. The monsters have escaped into four different worlds: Sand Land, Wet World, Plastic Place and Future Zone. As each world has eight levels and you visit them twice, Hewlett's going to have his work cut out capturing the escapees in the required time limit.

To aid him in his efforts he has a magic wand and bag. He can zap the creatures with a magical bolt and, while they're stunned, stuff them into the bag. Pulling down on the joystick at this point will send them tumbling back to their pens at the bottom of the screen.

It's a bright and colourful game with cartoon-like characters and a chirpy, though eventually grating, tune. The gameplay is tough with the devious level design making for some frustrating action. Some levels have been constructed so that there's only one way to complete them so, should you take a wrong route on one, you'll be unable to complete it. Although you can restart it you do lose your bonuses which is irritating. On the whole it's been well coded although Hewlett himself moves like he's in treacle.

If you've a high tolerance level and aren't prone to smashing your Amiga every time you lose your rag you'll be okay with this game. Those less evenly tempered will find it induces uncontrollable rages – as the games room at CU Towers can testify. It's hard but fun.

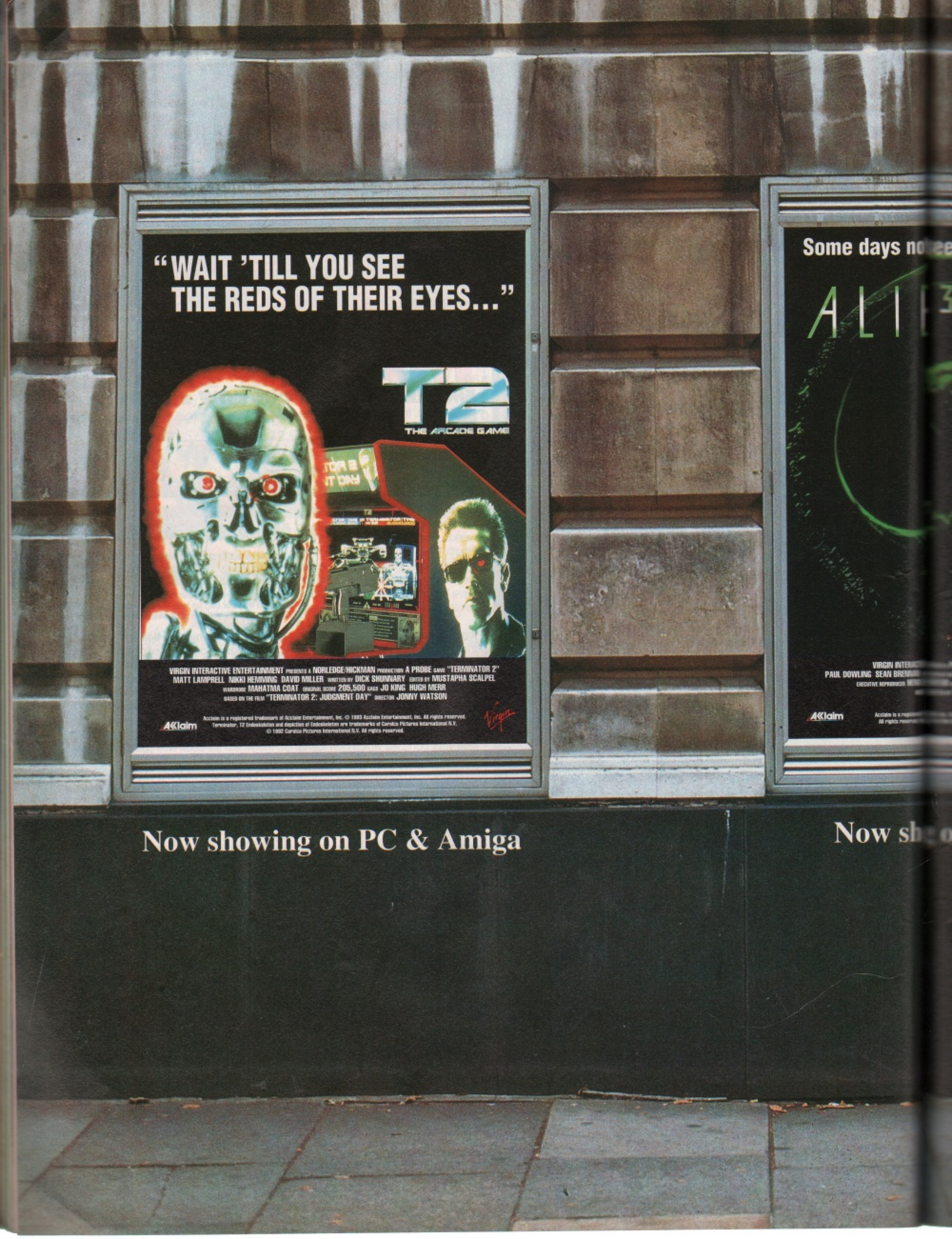
Jon Sloan

80%

Snakes galore! Get your timing right and you could fill your bag up with loads of monsters. The more you get in there at the same time the bigger your score will be.

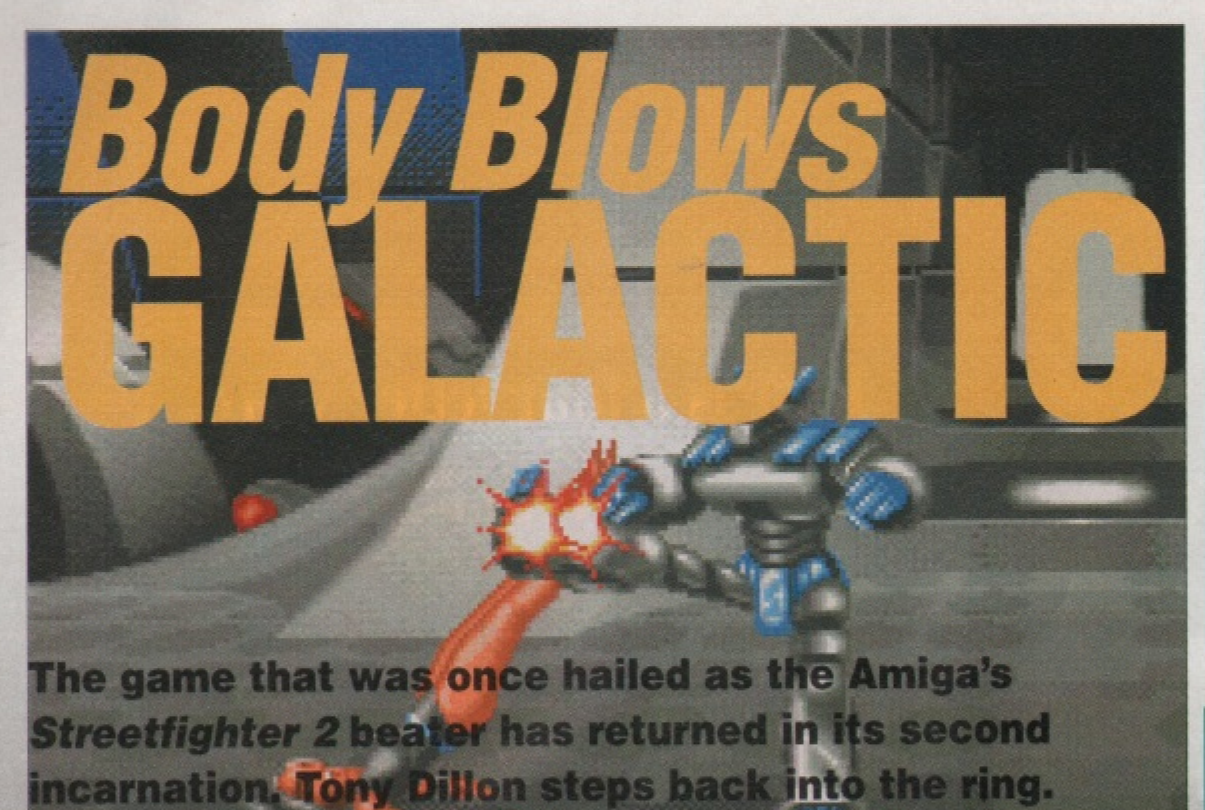


Utilise these craftily-placed springs to reach the higher platforms. Joystick control is fiddly here so be careful which way you push.



"WAIT 'TILL YOU SEE THE REDS OF THEIR EYES..."
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WARDROBE MAHATMA COAT ORIGINAL SCORE 205,500 GAGS JO KING HUGH MERR
BASED ON THE FILM "TERMINATOR 2: JUDGMENT DAY" DIRECTOR JONNY WATSON
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Body Blows GALACTIC



The game that was once hailed as the Amiga's *Streetfighter 2* beater has returned in its second incarnation. Tony Dillon steps back into the ring.

Make no bones about it, *Body Blows* was a damn good game. *Streetfighter 2* may have had the hype, but *Body Blows* was the game designed for the Amiga. Naturally it sold in ship loads, and deservedly so, as well as slamming Team 17's reputation even higher up the ladder. This Christmas, the story continues with *Body Blows Galactic* – not so much a sequel, more a new version of the original.

NOTHING CHANGES

Essentially only the graphics have changed. The game is exactly the same in most respects, other than the fact that this has 11 new characters, all with new moves and special abilities. The basis of the game is much the same, with you fighting your way through 12 opponents, to receive massive congratulations at the end. We've all seen beat 'em ups, and we all know how they work. After *Streetfighter 2* and *Body Blows*, you could be forgiven for thinking that they've gone as far as they can. Unfortunately, you'd be right. *Body Blows Galactic* is a step in the wrong direction.

The first big problem is the list of opponents. When you are fighting against human (or at least humanoid!) opponents, you can feel that you are attacking someone. There is some gratification to be had from kicking someone in the teeth/chest/groin, and this makes the game all the more exciting. When you are fighting against a ghost, a robot or some strange creature made up of cones, the game style instantly loses all character. There is little enjoyment to be gained by kicking a robot in the chest. After all, robots can't feel pain.

INDIFFERENCE

Team 17 have seen fit to release two different versions of *Body Blows Galactic*. One is for AGA machines, and makes use of the machine's 256-colour capability. The other is for non-AGA, and features standard 32-colour mode graphics.

The interesting thing is that the 32-colour version actually runs a fair bit faster than the AGA one, and it is also marginally more playable!

MISSED ME!

The next problem comes with the playability itself. I found the collision detection extremely frustrating. Half the time you can hit or be hit by something that, by rights, you shouldn't be able to reach. I also found it galling that, although half of the moves involve leaping in the air, it is far too easy to be hit, but very hard to actually land any points yourself.

Not that I'm saying the game is difficult. I finished it on my first go, using only one move! Thinking this to be a fluke, I put the game on its hardest level, and tried again, and completed it again. Is this really the kind of game Amiga owners want? Surely we are far enough down the road to be able to supply some sort of intelligent computer opposition in a game like this. The Amiga can already beat us at chess, in wargames and most other tactical games, so why not in a simple beat 'em up. If you are doing nothing more than just repeating a single move over and over again, the



JUNIOR

Junior is one big, bad dude and no mistake. Training in the art of Jawa La, which literally translates as 'hit you with my spinning arm', Junior has real speed on his side. That plus a few bionic implants, but we won't dwell on those. His Blitz move is pretty special, lashing out with 40 punches at once.



DANNY

Based on our own Mr Slingsby, Danny is cool, hard, has a great haircut, and is a bit crap when it comes to beating up anything more than half his height. He has a fairly standard set of moves, although his fireball capability is impressive. Mind you, it's nothing compared to Jon when he loses his temper.



PUPPET

If I could hand out awards in this game, Puppet would win the award for being the stupidest looking. Built out of a collection of cones, Puppet has the longest reach in the game, but little else. Easy to kick to bits, but not too easy to defend against, he's worth working with.



AZONA

I used to think that female characters were always the best to play in these games. However, after seeing Arona in action, I take it all back. Azona is a waste of graphic data. Most of her moves involve either jumping or swinging around on a stupid little skateboard with no wheels.

ALIEN BREED 2

TEAM 17 OUT NOW £25.99





All you non-AGA owners will have been drooling and dribbling over this one for the last month. With a whacking great 83 per cent from Jon Sloan last issue, *Alien Breed 2* is taking shoot 'em ups to a new level. Now Team 17 have released the non-AGA version, and, surprisingly, it's actually a better game. My only problem with the AGA version is that it is far too hard, and this version is just that little bit easier. Why? Well, the fewer colours (but very cleverly used – can you tell them apart?) mean that the screen moves around a little faster, and there are actually fewer aliens on screen at any one time, so there's slightly less chance of you getting totally obliterated in the first few seconds.

Other than that, the game is identical. You still have to travel out to Colony Alpha-Five to wipe out an invading alien horde, running



TEKNO
By rights, Tekno should be the hardest character – he is made out of steel and can fire missiles at people. But this is not the case. He just stands there and gets the stuffing knocked out of him on a regular basis.

Slow, clumsy and generally useless, he's definitely not the character to play.



PHANTOM
He's ooky, spooky and, to top it all, he's got no legs. If you ever thought ghosts were insubstantial, then think again. Phantom is a hard little guy, expecially with his Orb of Destruction move, which has him disappearing into the floor and turning into a steel ball which causes stacks and stacks of damage.



WARRA
Warra is king of the Ice world, and not a bad fighter with it. He has a good range of punches and kicks, and his best move has to be his icy breath. Essentially, he blows on people and they freeze on the spot, giving him all the time he needs to lay in with a good few hard blows and knock the stuffing out of them.



DINO
Forget the wimps in Jurassic Park, Dino is the kind of dinosaur that you really wouldn't want to meet on a dark night in a primordial swamp. He uses his long tail to great effect, and when you consider the strength of his attack, you wonder how dinosaurs ever became extinct. I supposes they smoked too much.



DRAGON
None of your fire-breathing nonsense here. This is one dragon that uses brute strength and a spiky backbone to win.

He may not be the fastest character in the game, but he is certainly the strongest. One solid punch from one of those heavily muscled fists and you'll be seeing stars for a week.



KAI-TI
The fastest character in the game, Kai-Ti can beat just about anyone at anything, hands down. Her Jawbreaker move is invincible, and with it you can pretty much waltz through the game. Her special move, the Finger Press, is a little pathetic, but what does that matter? The Jawbreaker move more than makes up for it.



LAZER
A pathetic spindly bloke with dodgy glasses and practically no decent abilities. His punches and kicks are fast, but ineffective, though he can fire laser beams across the screen – slowly – so I suppose he has some saving graces.

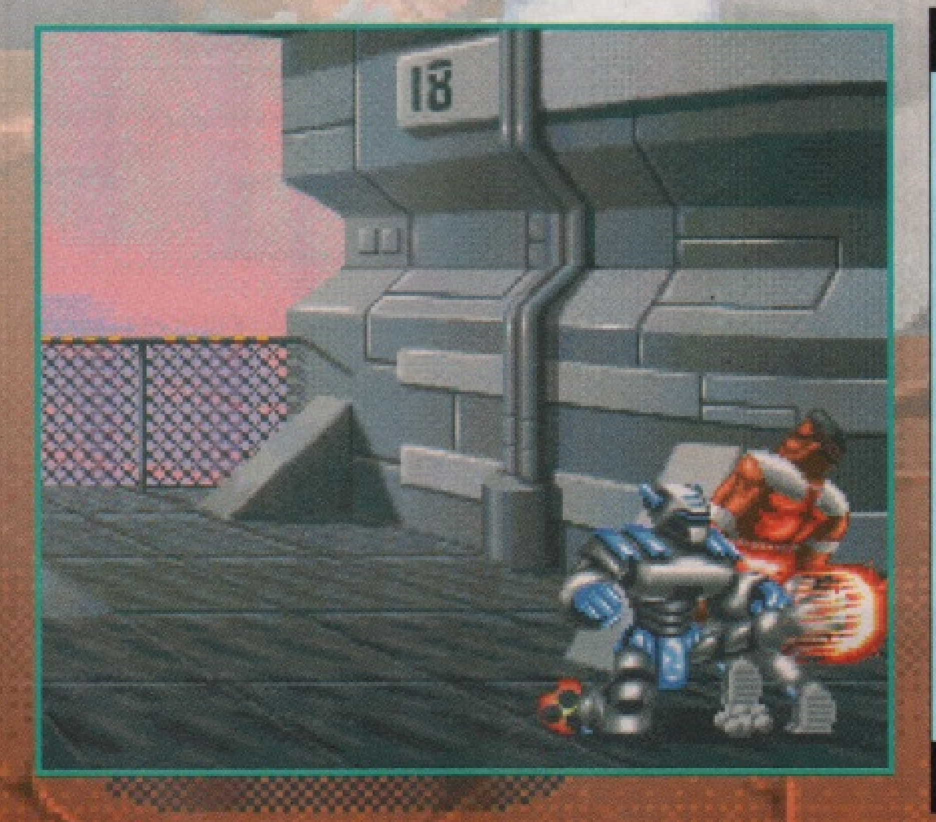


INFERNO
Inferno, as his name suggests, is a human fireball. Bad news for most people, as it means that even touching him can cost you energy. He has a few handy flips and spins, and a long fiery tail that can do masses of damage.

computer should recognise this and take some sort of evasive action. Instead, it just keeps on walking into the fight and getting suckerpunched.

Strangely enough, if you try to play it properly (i.e. not using a winning move over and over again) most of the characters are useless. Dino, Warra and Lazer are as ineffective as they come, yet Kai-Ti is invincible, due to her speed and Jawbreaker move – a move that never fails. This imbalance in characters means you will only ever want to play a couple of them, and once you have finished the game with them, the disks will be stuck back in the box and relegated to the shelf.

Body Blows Galactic will sell in droves, almost purely on the strength of the original coupled with the Team 17 brand name. A bit of a shame really, because it does not deserve the success. CU



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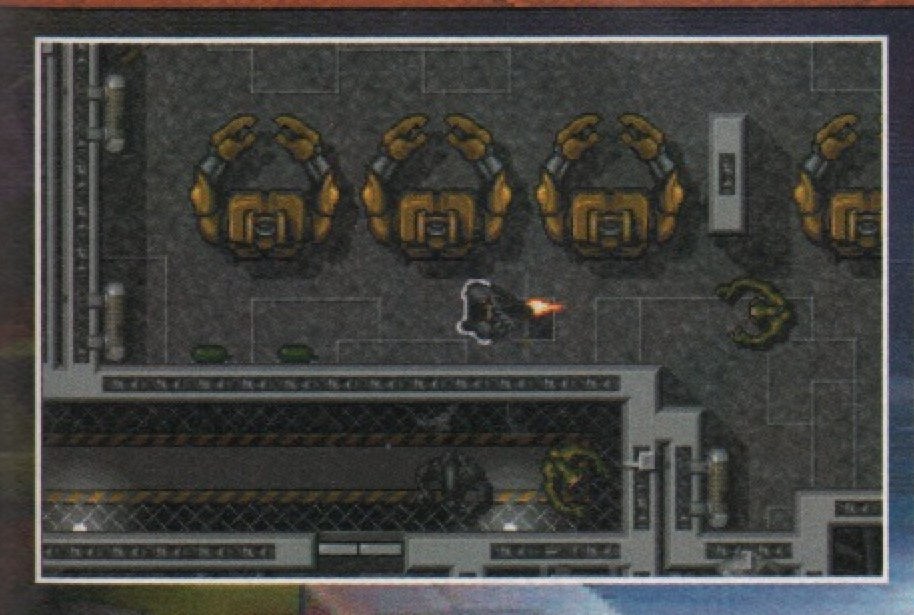
RELEASE DATE:	OUT NOW
GENRE:	BEAT EM UP
TEAM:	IN HOUSE
CONTROLS:	JOYSTICK
NUMBER OF DISKS:	2
NUMBER OF PLAYERS:	8
HARD DISK INSTALLABLE:	NO
MEMORY:	1Mb

GRAPHICS	71%
SOUND	74%
LASTABILITY	37%
PLAYABILITY	60%



A sad follow-up to a brilliant game. What a disappointment.

OVERALL 57%



around a top-view maze taken from games like *Gauntlet*, logging on to huge supercomputers located all over the base where you can buy extra weapons and power ups. It still has glorious graphics, with



some of the most realistic fireballs ever seen.

The sound has changed little too, although some of the speech has been taken out in favour of some more standard spot effects. There is so much going on at any one time, though, that you don't really miss it.

Alien Breed 2 is a massive game, with dozens of extremely challenging levels. It's still not easy, and you're still going to be pushed to finish this one in an afternoon. But what the hell? It's so much fun to play, you don't really mind wasting a week or three on it. CU

87%

Tony Dillon



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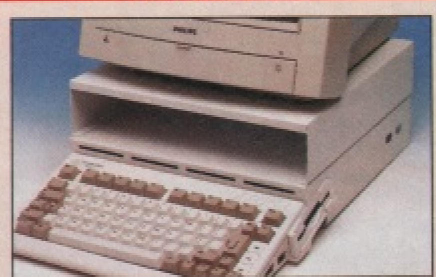
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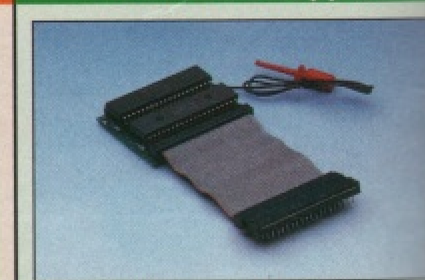
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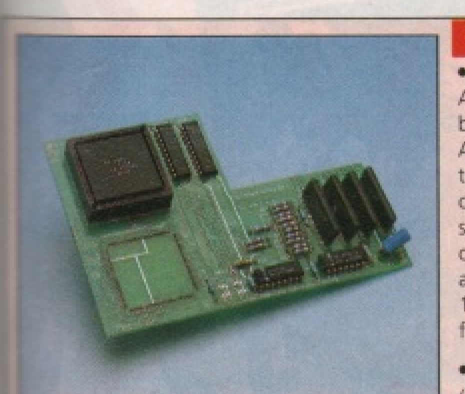
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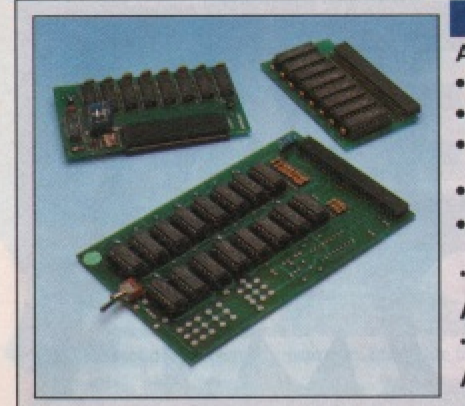
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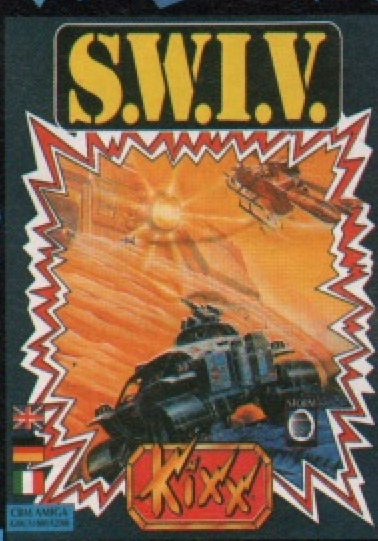




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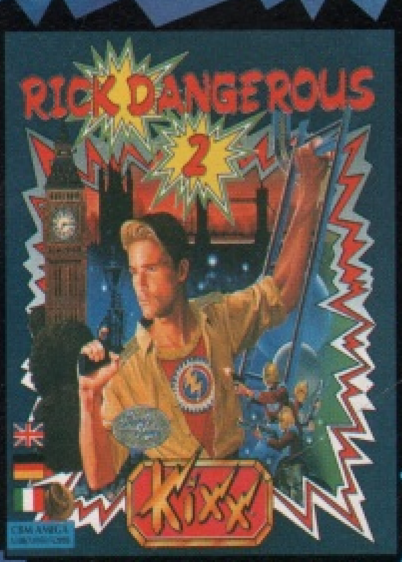


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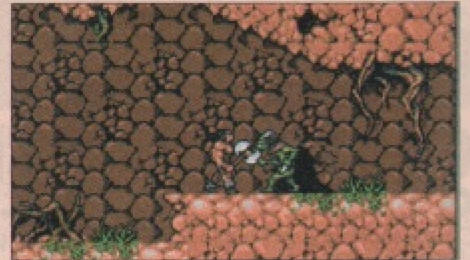


This guy's tough, you can't outrun him. Stand toe to toe and blast away, it's your only chance.

TORVAK THE WARRIOR

CORKERS OUT NOW £9.99

It's the same old story... the hero's family have been massacred by a marauding band of goblins. So, swearing revenge, he's grabbed his axe and set off to track them down. Thus, the scene is set for another crap platform-based hack 'em up. You know, I blame Arnold Schwarzenegger for the amount of god awful hack and slash games on the market. If he hadn't starred as Conan The Barbarian I'm sure there wouldn't have been such a resurgence in the genre. A fitting punishment would be to make *him* play every one of them.

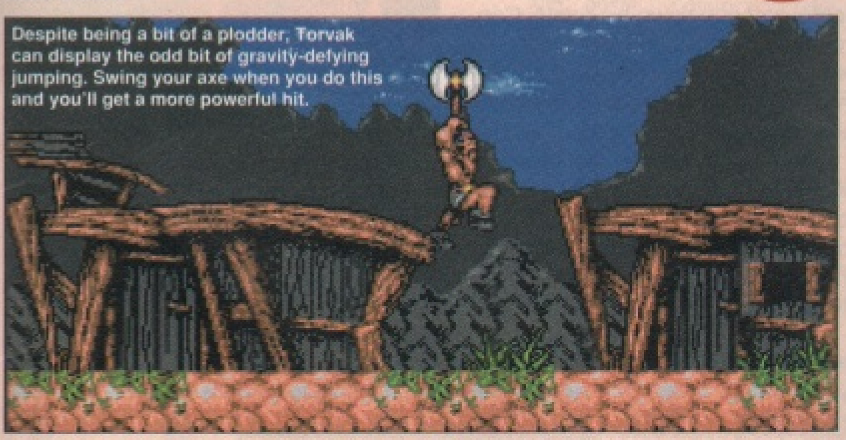


Down in the caves the goblins are lurking – probably having a crafty smoke. Trust Torvak the Tab Snatcher to break it up.

I can't think of anything decent to say about *Torvak*. The sprites scroll so slowly they act like they're on Valium. The firebutton response is so tardy that you can hit it two or three times before Torvak swings his axe. And the graphics and sound are basic in the extreme with in-game tunes non-existent. All in all a dire package with absolutely no enjoyment value. Avoid at all costs.

Jon Sloan

21%



Despite being a bit of a plodder, Torvak can display the odd bit of gravity-defying jumping. Swing your axe when you do this and you'll get a more powerful hit.

CORPORATION

CORKERS OUT NOW £9.99

Corporation was the first game to offer face digitisation. What this boiled down to was customers sending a picture plus statistical details (height, weight, skills, etc.) to Core Design who would customise the purchaser's game so that he/she became a character in it. You would see everything from a perspective identical to the one you view the real world from. This gimmick has been copied since then by, most notably, US Gold with *Legends of Valour*. But Core were the first!

Apart from the neat marketing ploy, *Corporation* is a standard 3D adventure game. Your character is dropped onto the top of the UCC building with a mission to reach the lab at its base to get some evidence. It's believed that UCC has been genetically engineering illegal mutants for use as mercenaries and it's up to you to prove it. Of course, standing between you and the truth are 16 floors of robot and mutant filled hell.

Instead of opting for the old linear movement (forward, back, left and right) you can walk diagonally, move and turn at the same time and crouch – just like real life. The downside of this freedom is that the game runs very slowly indeed, even on an A4000/040. If you can put up with this lack of vitality, *Corporation* is a cool game. The graphics have a richness that is rare outside PC adventure games and there's a certain atmosphere that's generated by the unusual plot and clever traps. For instance, the things you meet are not necessarily what they appear to be. On the first level there's a giant crab creature that won't die no matter how many times you shoot it. However, if you look carefully you'll see three projection lenses in the wall – these are creating the holograматic creature you're shooting. Blast them and it will disappear. An interesting and innovative RPG. Add it to your collection.

Jon Sloan

80%

Watch out for the cameras in the ceiling. If they spot you before you shoot them the corridors will fill with knock out gas. Remember – shoot first and forget about the questions.

WAR ZONE

CORKERS OUT NOW £9.99

I've always had a thing for top-down blasters. Ever since I played a coin-op called *Heavy Barrel* I've been addicted to the things. The aim of all these games is simple – run up/across the screen, meet lots of nice people, then kill them. Along the way there'll be the odd weapon power-up and extra energy to collect. That's about it really.

War Zone is no different. You get to play a stripped-to-the-waist warrior (Rambo has a lot to answer for!) as he journeys across five levels of jungle, swamp and sewers before reaching the enemy base. The enemies you'll face range from easy-to-kill cannon fodder soldiers up to huge battle tanks that need multiple hits from a bazooka to even scratch.

Of all the recent Corkers releases this one has to be my favourite. It's not special by a long way. The graphics are basic, the sonics limited to explosions and bullet effects and the feel is dated. Overall though, it's a fun game to play, especially with two players working together.

Jon Sloan

81%



Power your weapon up and you could get this flame thrower. Very useful for toasting the enemy soldiers.

All good war films have an attack on the beach somewhere in them. Here your warrior can explode oil drums to see if there's any goodies inside.

COMBAT CLASSICS 2

EMPIRE OUT NOW £29.99

Combat Classics 2 features three of the best combat simulators to appear on the Amiga with, not surprisingly, two of them coming from the MicroProse stable. What a mix! Talk about planes, trains and automobiles – this game should be renamed planes, tanks and submarines!

First up, we've *F-19 Stealth Fighter*, MicroProse's not-too-far wrong guess at the then secret US radar-invisible bomber. Although it uses the same graphic engine as a lot of MicroProse simulators, the game is radically different. There is no more high-speed racing into the target area, followed by loads of wanton and extremely easy-to-spot combat and then paving a blazing trail home. *F-19* is more about hiding in corners, crawling along tunnels and generally keeping out of sight. A lot harder than most, but more rewarding than most.

Then we come to the incredible *Pacific Islands*. Take four tanks, and then win a war with them. It isn't the easiest game in the world, but then who said war was easy? *[One more cliche, and you're out! – Ed.]* Imagine a game that really put you in control of a tank, where a mixture of shaded polygons and scaled bitmap images gave a more realistic view of the outside world. Where real strategies took real planning, but ultimately win through, provided you have the guts to win through the actual combat. What can I say, other than it's one of my favourite games of last year.

Finally we reach MicroProse's *Silent Service 2*. *SS1* was a superb simulation in its own right, and this sequel takes everything that was good about the original and improves upon it immensely. It takes a while to get used to, and the action is limited due to the type of craft being simulated, but you could do a lot worse if you're looking for a decent challenge. All together, they make up one of the best compilations around this Christmas, and a bargain at the price!

Tony Dillon

89%

SUBURBAN COMMANDO

ALTERNATIVE OUT NOW £24.99

Film licenses like this one don't come around very often. Thank god! If any of you remember the film, this game is a lot worse. It starred ex-WWF wrestler Hulk Hogan, favourite of kids and grannies everywhere, as Shep Ramsey. This intergalactic hero starts the film by destroying the evil General Suitor's ship. Unfortunately, Shep's ship is damaged in the battle and he crash lands on Earth. Here he must find parts to repair his ship while fighting off the attentions of the bounty hunters sent to kill him.

The game follows the film fairly closely with the first level comprising a scrolling shoot 'em up as Shep attacks the battleship. Once this level is passed the rest of the game turns into a basic platform beat 'em up. First there's the battleship, then downtown L.A. and finally a half finished skyscraper. All along there are robots, guards, street thugs and bounty hunters to avoid or bop on the nose. As an ex-wrestler Hulk/Shep is handy with his fists and feet but his moves are limited to a punch, uppercut, sweep and flying kick. The enemies have a range of weapons at their disposal including lasers, rivet guns, knives and batons. So, taking them out is usually a question of timing rather than steaming in with fists flying.

The main sprite moves like he's on ice but his animation is lively. The tunes may very well come from the film but I didn't like them either. The gameplay is fast but uninspiring. Overall, it's not really worth the bother. If you're eight years old and still pining for the days Hulk took on The Nasty Boys in the ring then you'll find this nostalgic fun. Otherwise, forget it.

Jon Sloan

68%



Level one starts with a shoot 'em up. It's an important level 'cos how well you do here determines how powerful you are in the later levels.

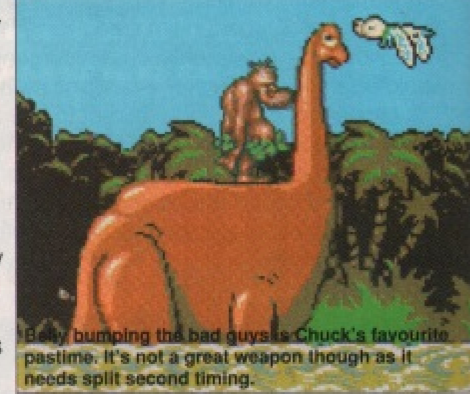


Chuck'll occasionally find a dinosaur willing to give him a ride. Don't fall off though 'cos that swamp is deadly.

CHUCK ROCK

CORKERS OUT NOW £9.99

Chuck Rock has everything a good platform game should have: colourful sprites, cute main character, loads of enemies and the usual naff plot. Naff plot – his wife, Ophelia, has been kidnapped by Gary Gritter, so Chuck's out to get her back. Unfortunately, she's been spirited away across a hostile land which is populated with loads of dinosaurs and most of 'em see Chuck as their next meal. There's swooping Pterodactyls, charging woolly Mammoths and a huge Tricerotops – all out to get him. Luckily, he's a pretty versatile caveman. First, he's got a secret weapon down his pants. Can you guess what it is? That's right – his belly. His giant gut can bounce enemies right off the screen. And he can also throw rocks or use them as stepping stones to reach higher platforms.



Belly bumping the bad guys is Chuck's favourite pastime. It's not a great weapon though as it needs split second timing.

Despite having only five levels, it's a pretty big game. There's loads of sub sections for Chuck to complete, hundreds of dinos to avoid and the odd puzzle to solve. As it's an action-orientated game the puzzles are basic, and mostly involve throwing a rock or belly butting something. There's a great cartoon feel to the game with the dinos spitting false teeth, pulling massive hammers out of nowhere and rocks that suddenly sprout legs.

Chuck Rock's a game that every joystick waggler should have in their collection. It's the kind of game that you can pick up, have a quick play with then put away for a couple of months. Definitely worth a tenner.

Jon Sloan

80%

DINOSAUR DETECTIVE AGENCY

ALTERNATIVE OUT NOW £16.99



Ness must have a bit of dog in him 'cos he's a nifty little digger. Tunnel down and he'll fall into this mine. Better watch out for the spiders.

Dino Detective Agency is a very poor attempt to cash in on the still rolling Jurassic Park bandwagon. You get to guide Sherlock Ness, the 'famous' dino detective, through four cases (or levels) that he's got to solve with the aid of his trusty camera. Missing the chance to introduce some sex into the storyline – you know, man in raincoat taking furtive pictures – the four cases are boring in the extreme focusing on missing budgies, bank robberies, etc (yawn).

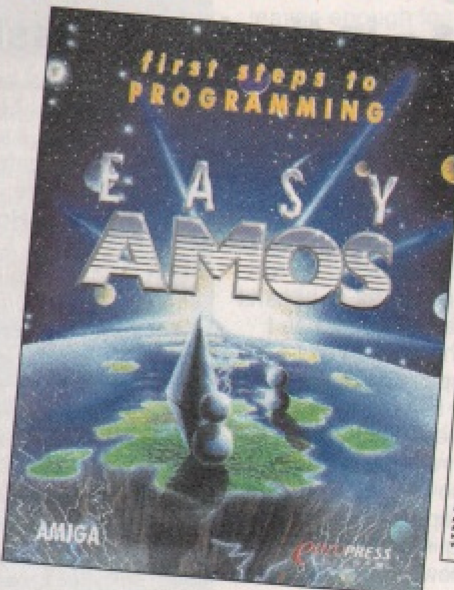
The main sections of the game are platform based with various bad dinosaurs out to stop Ness. Every time they hit him he loses one life. The only way to stop this is to jump over or stun them momentarily with the camera's flash. Of course, you've only got a limited amount of flashes, but they can be topped up by collecting the bulbs scattered around the level. At the end of each level there's a shooting gallery scene where you guide a wobbly crosshair around the screen in an attempt to get a full facial shot of the crook. Do it in the time limit and you're okay, fail and it's game over.

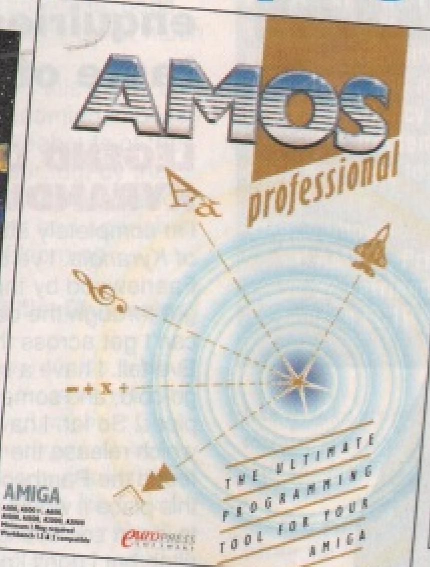
This game is a waste of a floppy disk. Crap animation, crap sounds and non-existent gameplay. If you can endure playing it for more than five minutes you deserve a prize. As an alternative to a slow, painful death buy it. On second thoughts take the slow, painful death.

Jon Sloan

20%

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VAMP

If you're looking for adventure you've come to the right place darlings. Each month, I attempt to answer your RPG and adventure enquiries – in the best possible taste of course!

LEGEND OF KYRANDIA

I'm completely stuck in the *Legend of Kyrandia*. I've been told to go to Faeriewood by the wizard, but I can't get through the caverns because I can't get across the Chasm of Everfall. I have a spell that makes me go cold, and some sort of musical pipes. So far, I have found the stones which release the trap and I have found the Pantheon of Moonlight. In this place it would appear that I have to insert something into the hole in the altar, but I don't know what to stick in it. Can you help?

L. Grynich, Horsham..

To have come this far you have obviously appreciated how to use the fire berries to light up the caves, so leave the Pantheon and continue to map the cave until you find the Cavern of Twilight. Here, you can pick up a coin.

*You said you have already found enough stones to throw into the basket to open the trap which seals the cave's entrance, so I suggest you go back to the outside world and think for a moment. You've got a coin. Now I bet you **wish** you knew what to do with it..*

THE SECRET OF MONKEY ISLAND II

In the *Secret of Monkey Island II*, how do I retrieve the piece of the map from Governor Marley's mansion after it's blown over the cliff?

Laura Adams, Rainham.

When you nipped smartly through the mansion's kitchen with that angry cook at your heels, did you think to pick up the fish that was lying there? If you did, you have all you need to make a swop with the angler on Phatt Island. The fisherman hasn't pulled anything all day (despite his big, impressive rod), so it's up to you to get a hold of it and see if you can think of a better use for it. (Answers in a plain envelope please.)

THE SECRET OF MONKEY ISLAND

On *Monkey Island*, how do you get past the troll who is asking for a toll? Please, if you can, send a reply as soon as possible.

Martin Goode, Hornchurch.

Anyone who has ever been French-kissed by a troll will tell you that it's not a pleasant experience. The reason is that trolls eat a lot of fish and their breath smells like a fishmonger's hanky. By now the smart readers will have gathered what the troll wants in payment, but just for you I will elaborate.

At the rear of the Scumm Bar there is a fish lying on the jetty. By stepping repeatedly on the loose plank you can scare away the greedy sea-gull and pick up the fish for yourself.

P.S. You do realise that I'm not suggesting that you eat the fish and then French-kiss the troll don't you?

INDIANA JONES AND THE LAST CRUSADE

My adventuring problem lies with *Indiana Jones & the Last Crusade*. I have allowed the keg of beer to empty onto the floor without filling the stein first. I have tried leaving the game running for hours in the hope that the keg would refill, but, alas, it does not.

There is no way to progress any further in the castle without the benefit of the beer. For example, I need to pour it onto the hot coals, and to disable the alarm system. Please don't say I have to go back to the beginning because I have no save game files. If you can offer no solution then please publish my phone number in the hope that someone may have a disk with a suitable save game they can lend me.

Keith Thornton, Essex.

You are quite right that you need some beer from the barrel to put out the fire and disable the alarm, but this game is pretty fair at letting you do things by another path.

The main use for the beer is to get meat for the dog, then you can get the boxing trophy which you can fill with beer and give to Biff the Nazi. Having had a drink, Biff will think he's twice the man, but in fact his performance will be seriously hampered. (Isn't that the same old

Adventure

AGONY CORNER

If you've got a problem of a more personal nature, you can get expert advice by writing to Vampyra's Agony Corner.

Q I've just read a 'how to do it' book, (actually it was nearly all pictures) and I was amazed at the physique of the guy in the photographs. Now I'm worried that I'm an abnormal shape.

How does someone find out if their equipment is adequate? I'm 19 and what I would like to know is, when does your 'equipment' stop growing?

A *Your 'equipment' continues to get longer for as long as you are prepared to tie bricks to it. Don't worry about the guy in the photos I know for a fact that he wears lace underwear.*

Q I am an 18-year-old female student, yet my father still insists that I can't stay out all night.

I'm sure that a night person like yourself would agree that this is unreasonable.

Could you reply and tell my father that I don't need to go to bed so early?

A *I'm sorry, but I don't agree with you. No matter when I go out, I always try to be in bed before midnight. Otherwise, I go home!*

story, girls?) You could, instead, just fight your way past Biff and forget the beer. It would be a tough fight but I'm sure you could do it if you thought I was waiting for you upstairs.

Hopefully that should save the day, so we don't need to publish your telephone number – I'll just keep it for myself.

GOING FOR THE JUGULAR...

I did have problems with *Monkey Island*, but after I saw your lovely pictures in the November issue of CU AMIGA I forgot all about my burdensome problems. If you are Vampyra then I am Dracula. How about a date?

Damien Robinson, Swansea.

How sweet you are. Hmm I do like tall dark handsome men. Perhaps we could meet, but it could only be for just a quick bite.

WAXWORKS

I'm stuck in the Mine section of *Waxworks*. I'm trying to work out where the mutant's weak spots are. Is there some way to make the chemical spray last longer, so it leaves enough for the vines, pods and spikes? Uncle Boris is not much help.

I've really enjoyed this game up until now, but it's becoming impossible. I know the whereabouts of the medi-kit for the doctor, but by the time I get anywhere near it, I've lost most of my hit points and I perish at the hands of the welcoming mutants.

Keith Ellis, Chelmsford.

There are many ways to skin a cat, so don't despair. In the mine you can find a generator full of gasoline. Click on the generator's drainage hole and select open. (Use the screwdriver from the professor to do this bit.) Next, click on the sprayer and drag it over the flowing gasoline. Once the sprayer is full you can quickly replug the hole to leave enough in the generator for a second refill. You now have two choices. You can either use the gasoline mixture as it is, or use it with the lighter from the professor to make a wicked flame-thrower.

LEISURE SUIT LARRY II

I've been 'looking for love in all the wrong places' and getting nowhere.

I'm stuck on the beach of the tropical island just wearing the bottom half of an itsy-witsy bikini.

The Russian agents won't let me past them because it's obvious to them that I'm not a girl.

Terry Harvey, Penzance.

Walking around in just your bikini bottom is fine if you have a figure like mine (I've got curves in places where some girls don't even have places), but I suggest that you search the bottom of the ship's swimming pool to find something that will cover up your deficiency.

THE IMMORTAL

I am on the last level of *The Immortal* and I'm facing the dragon. Once I have used my six blink spells and fire protection I am done for.

I also have six statue spells, magnetic hands and sonic protection, all of which I've tried but none have helped.

Brett Higgins, Tasmania.

I did have a small fiddle with this game, but I found I had to move too quickly. I do like to take my own sweet time over things. When you land on the rock activate the blink spell and the dragon will appear.

You must avoid the fire six times using the blink spell. The dragon will go on to breathe fire once more, but it won't manage it first time. (I'm not surprised if the poor thing has already managed it six times!)

As he starts to try again, activate the fire protection spell. Hold the amulet up to the light but do not read the runes. At this point the wizard will appear. Activate the statue spell and use this to protect yourself from the wizard's lightning bolts. At the dragon's fourth attempt activate the sonic protection spell. Use the two remaining body statues to protect yourself from the lightning and flying monsters.

After reading the wizard's message, quickly use the magnetic hands to get the amulet from him. The dragon's next blast of flame will be so powerful it'll fry the wizard to a crisp.

Well all of this excitement has brought quite a flush to my cheeks, so I think I'll get out of these damp clothes and slip into a dry martini. See you next month. And remember, don't hesitate to write to me if you are having any problems with adventure games, RPG games and anything else that tickles your fancy. Write down your little problem and send it in a plain envelope to:

'Dear Vampyra'
CU AMIGA, Priory Court,
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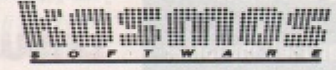
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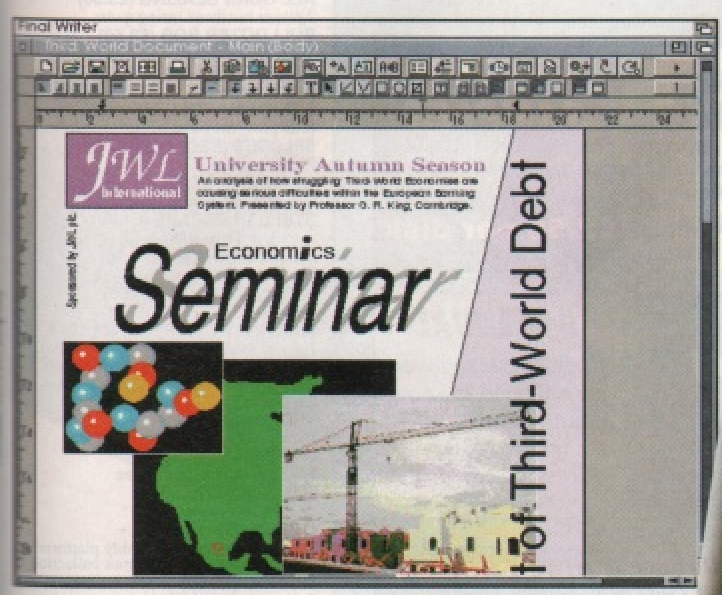
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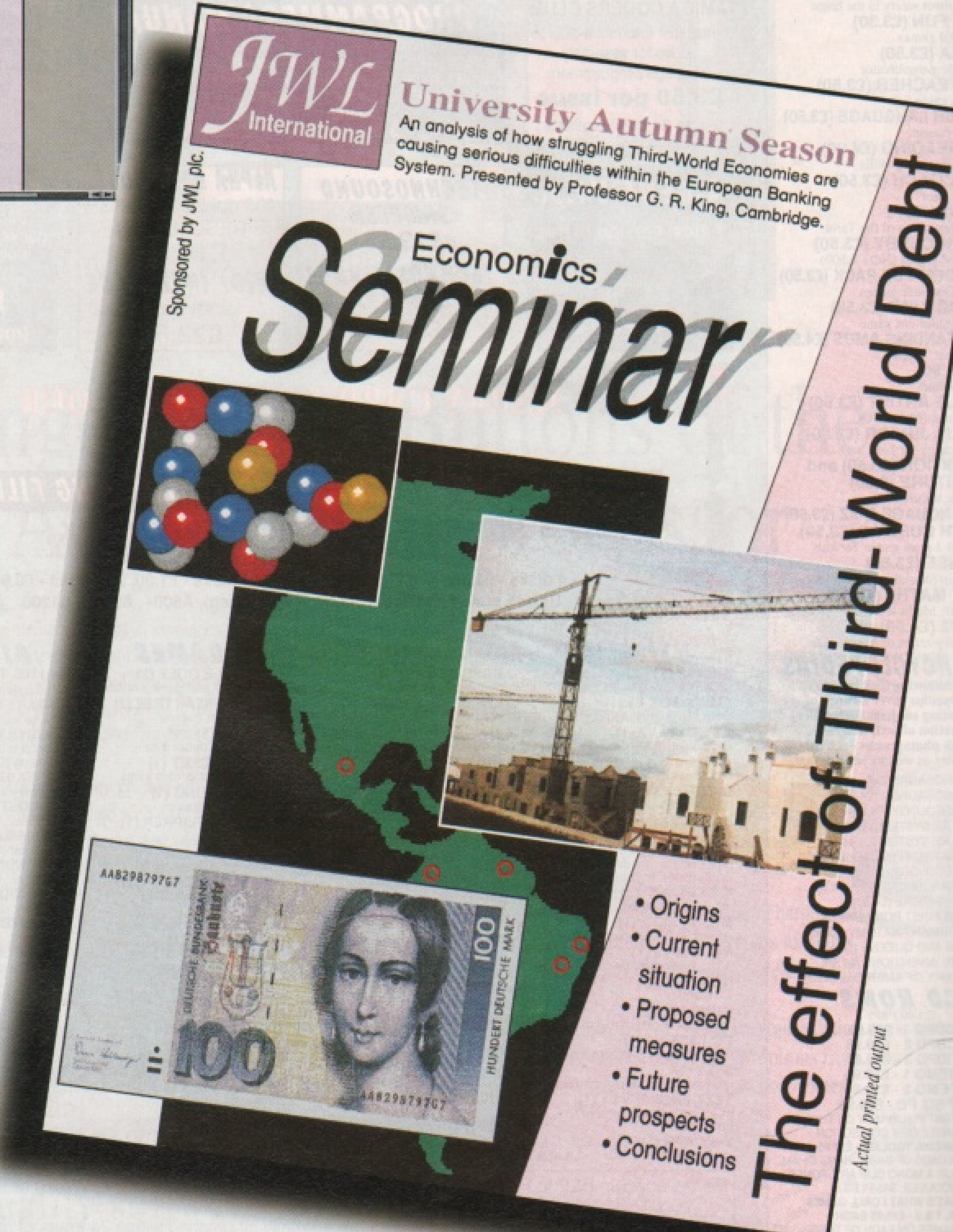
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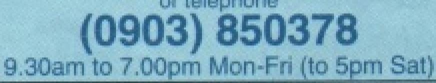
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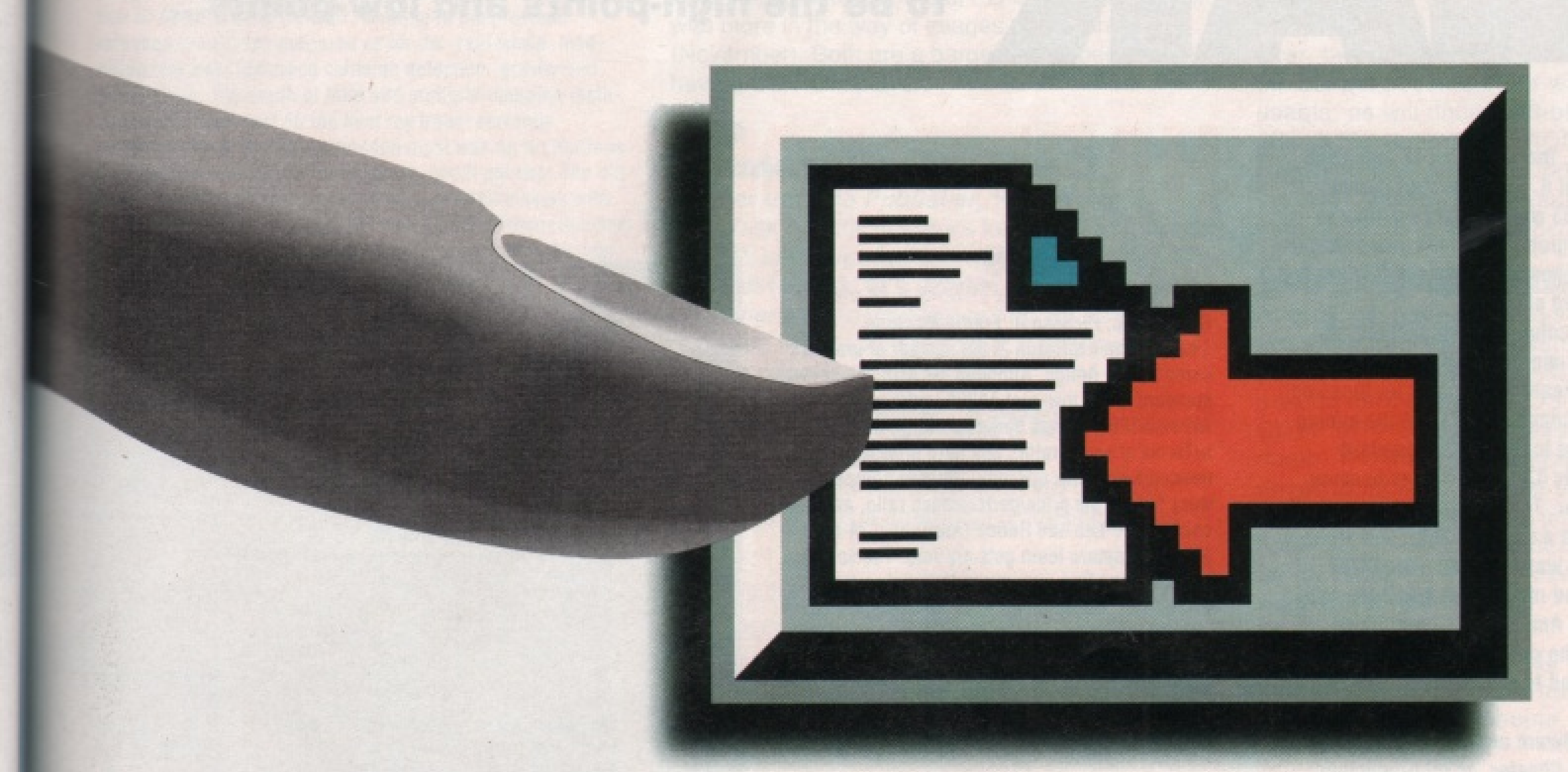
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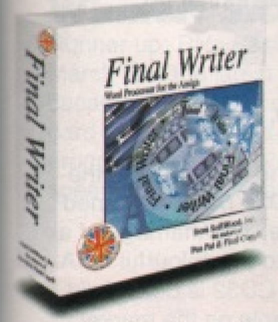
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CUA

REVIEW OF THE YEAR

As the sun slowly sets on another product-packed year, John Kennedy takes a look back over the past twelve months and selects what he considers to be the high-points and low-points...

That was the year, that was – all 12 magazine packed months of it. From the 'Get Serious' point of view 1993 was an excellent time to own an Amiga – lots of graphics, lots of new hardware and the brand spanking new A1200 was still warm and smelling of freshly baked plastic.

The new 16 million colour AGA chipset brought forth a rash of software upgrades, and prompted several manufacturers to create video cards for those not wanting to dump older computers. At last the ageing Motorola 68000 was laid to rest as the standard Amiga CPU, and the fully 32-bit 68020 has become the entry level processor. The standard memory limits have also been upped to a sensible 2Mb, and probably the best Amiga ever was released – the CD32.

Much rumouring and murmuring has accompanied the decline of the Amiga and Commodore in the US, but whatever the current share price, the CD32 is widely reckoned to be the machine to make or break the company.

Many promised hardware and software items simply failed to leave West Chester, as all production was concentrated on the new Sega/Nintendo beater. If it succeeds, which it deserves to, the Amiga will emerge stronger than ever before with a fresh user base eager to experience what the Amiga is capable of. If it fails, who knows... Perhaps we'll all be using Falcons this time next year (hah!).

CU AMIGA 'GET SERIOUS' AWARDS 1993

As the only one sober enough to remember the past 12 issues with any clarity, it has fallen on my shoulders to select the items of hardware and software which I think deserve to be considered worthy of a jewel encrusted, 24-carat golden Get Serious statue in the shape of Dan blowing his nose.

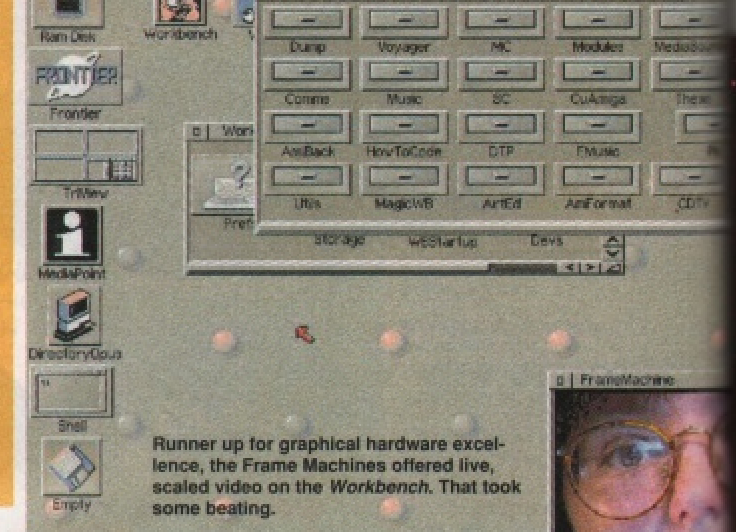
I've judged the all items from the current technological standpoint (and which have survived on my hard disk the longest), which may mean the scores received at the time of the review are in conflict with each other.

HARDWARE AWARDS

GRAPHICS
Winner: Retina/V-Lab

Runners up: Picasso II, Frame Machine

1993 saw an explosion in the number of graphics cards for the Amiga. Although the AGA chipset was standard in the low-cost A1200, existing A2000/A3000 owners had made large investments in terms of accelerators and hard drives,and needed a graphics upgrade. German companies were best at the price/performance ratio, and the pairing of V-Lab and Retina (April) as a 24-bit display and capture team gets my vote. The software upgrades to allow sequences to be taken from video lifts it above all other cards. A close second was Picasso II (December), which also provided excellent results and the Frame Machine (September) which may had been the most tricky Zorro card to fit ever, but offered very clever real time re-scaling of live video.



Runner up for graphical hardware excellence, the Frame Machines offered live, scaled video on the *Workbench*. That took some beating.

VIDEO
Winner: RocKey

Runner up: VideoMaster

Desktop Video has still to reach its full potential on the Amiga, due in part to the high price of equipment. The RocKey Chromakey was an exception, as it offered real live chromakeying effects at a fraction of the cost of other hardware. It's even cheaper now, which makes it remarkable value for money. Also eminently affordable was the VideoMaster digitiser, which managed to capture live video and sound at 25 frames a second on a standard Amiga. This amazing feat was only let down by software which didn't fully support the IFF animation standard.

SOUND
Winner: Technosound Turbo II

Runner up: DSS8+, One Stop Music Shop

There is still no definitive cheap 16-bit sound sampler on the Amiga, and although several have tried (Clarity, Maestro) the big shortcoming is always the software support. For 8-bit quality, Technosound Turbo II gets the prize, with the clearly-cased DSS8+ from GVP coming second. For bringing professional level sound (almost) within reach of ordinary Amiga owners, One Stop Music Shop gets an honourable mention.

COMMS
Winner: GVP PhonePak

Runner up: US Robotics Sportster

In the October 'Wired World' article we looked at nearly every modem under the sun. Oddly, the winner isn't a modem, it's the GVP PhonePak which is an amazing card capable of answering the telephone, taking messages, giving messages and doubling as a FAX machine. It's an incredible card which deserves more attention that it's currently getting. The second prize goes to the Sportster modem, which consistently sent data the fastest and made the most reliable connections. It may look like a Stylophone, but it's a darn good modem.

ACCELERATORS
Winner: M1230XA

Runner up: GVP1230

The A1200 is a hugely popular machine, which means there is a large market for memory and accelerators. GVP and Microbotics were two companies quick to offer an upgrade for the existing 68020 processor. The winner is the M1230XA (July) from Microbotics, which can support up to 128Mb of RAM if you can afford the SIMMs. With this card, the A1200 went faster than the A4000/030 – a terrific achievement. The GVP card (April) was almost as fast, but cost slightly more and that's the only reason it was runner up.

MISC
Winner: CD32

Runner up: Amiga 4000/030, Commodore 1942 Monitor

Much to everyone's surprise the successor to the CDTV, the eagerly awaited CD32 (August) turned out to be one hell of a machine. The marriage of a double speed CD-ROM drive to the colourful AGA chipset and 68020 means the CD32 is potentially the most powerful games console on the market. Commodore promised 70+ titles for Christmas, and although this target has not been reached there are still a lot of excellent games available. Minor criticisms of the CD32 include a rather naff plastic case and the lack of serial or floppy disk ports. But at least the latter will be fixed by the forthcoming expansion unit.

The Amiga 4000 launched late the previous year offered amazing power with its 68040 processor, but unfortunately was beyond the budget of many users. May saw the A4000/030, which used a much cheaper and slightly slower 68030 engine. The A4000/030 is the replacement for the A2000 and initial sales out-stripped supply.

To make the most of the new AGA flicker-free screen modes you need a VGA or multisync monitor, and one of the best is also from Commodore (a really good year from the techies at Big C). The 1942 will display all screen modes at good resolution and even has a pair of stereo speakers for games players. Nice one.

SOFTWARE

GRAPHICS
Winner: *Real 3D v2*

Runners up: *Brilliance, DeluxePaint IV AGA*

Image rendering took a giant step forward with the introduction of *Real 3D v2* in October. Nothing in the previous releases could have prepared us for the 'real world' modelling features, including collision detection, gravity and motion blur. The depth of field and multiple mapping methods have made *Real 3D* the best ray tracer currently available. What the Amiga needed most was an art package to make the most of the AGA chipset, and it got two. The old favourite *Deluxe Paint* (January) was updated to work with the16million colour palette, but new boy *Brilliance* (October) wrenched the crown away from it with some incredibly fast operations.



Believe it or not, but I rendered this image using only *Real 3D v2*, the most important Amiga graphics program this year. [But why an air-freshener? - A rather puzzled Ed]

PROGRAMMING
Winner: *SAS/C*

Runner up: *Blitz Basic 2*

March saw the latest upgrade to *Lattice C* – it became *SAS/C* and even faster. It is now the standard by which others are judged. For more basic programming, *Blitz 2* (April) offered incredible speed and some neat graphics and sound support.

CD-ROM software
Winner: *Aminet* collection

Runner up: *CDPDIII*

The award for squeezing the most high quality software on to one disc goes to the Walnut Creek *Aminet* collection, which filled hundreds of megabytes with archived material from the world's largest Amiga PD collection (December). Almathera's third volume of PD is more accessible, with more in the way of images and sounds (November). Both are a bargain, provided you have a CD-ROM player.

DTP
Winner: *PageSetter 3*

Runner up: *The Publisher, Wordworth 2*

Gold Disk are still the bee's knees when it comes to DTP, and *PageSetter 3* (March) offered hundreds of features at a bargain price. *The Publisher* was so impressive that we actually reviewed it twice and is now at a new budget-busting price!

MOST LUSTED AFTER HARDWARE

The last year saw many exciting new developments, as well as a great deal of teasing. Along came the CD32, but where was the FMV, first demonstrated to an unbelieving bunch of journalists? And what about the expansion for the A1200? Where will it leave existing A1200 memory expansions and accelerators? What about the fabled Falcon-beating Digital Signal Processor, the retargetable graphics, the 16-bit sound?

PREDICTIONS

The next year will be make or break for Commodore. Assuming we're all here next year, here is what I predict I'll be writing about: MPEG will become more widely available and usable, as will decent 16-bit sound cards, affordable writable CD-ROM and CDXL (AGA). New high-end Amiga Workstations based on the AAA chipset will be launched with the home version running *Workbench* and *Windows NT*.

MOST UNDERRATED THINGS

After all we have been given to play with, there are a few items which seem to get a lot of bad press, or no press at all. *Arexx* is still the unsung hero of *AmigaDOS*, and the A570 and CDTV CD-ROM drives died a most unnecessary death. The internal IDE interface brought hard drives to more users than ever before, and all some folk can do is sniff and say 'should have been SCSI'. Finally, *CrossDOS* gets a mention for providing an easy to use bridge with the worlds of IBM and Apple.

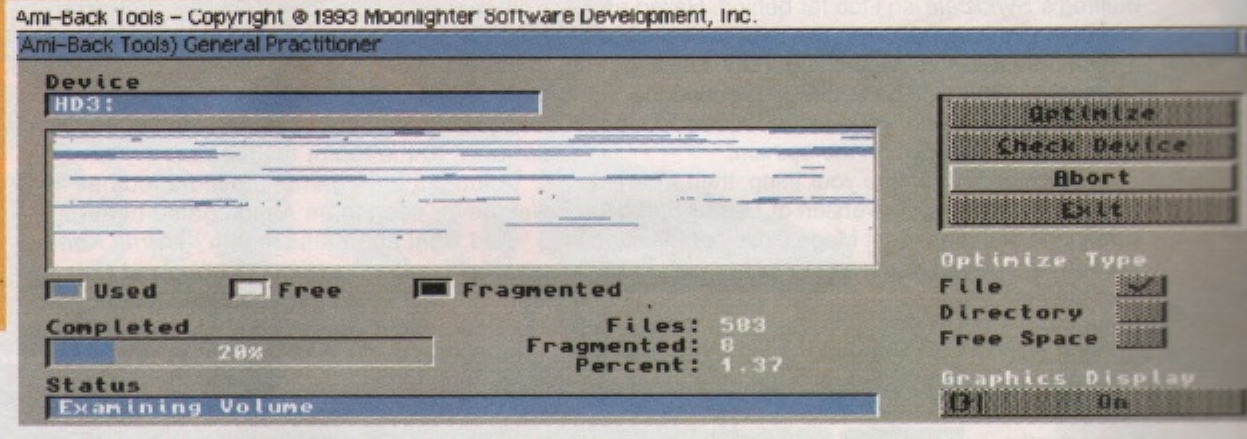
GOODBYE TO...

Last year saw the departure from CU AMIGA of several talented people, as well as: Nick Veitch (can't remember where he went – the competition entries to the 'I think Nick is a traitor because...' competition where too numerous and rude to print); Heather Turley (the matriarchal figure responsible for getting copy in); Jon Sloan (who has had enough of games software to last him a lifetime – so he's going to work for a games software house); Tom (Chief Judge) Glenister, CU's ex-Ad Manager and our resident flight sim expert with the Biggles moustache to go with it; and finally, our beloved Publisher, Garry Williams, the man with a heart of gold and an empty wallet when it came to getting a round in. We'll miss them one and all...

UTILITY
Winner: *Cygnus Ed*

Runner up: *Amiback & AmiTools II, PC Task*

For smooth, reliable and speedy text, you can't beat *Cygnus Ed Professional* (December). Close runner-up was the *Amiback* pack (July) for recovering after hard drive mix-ups.

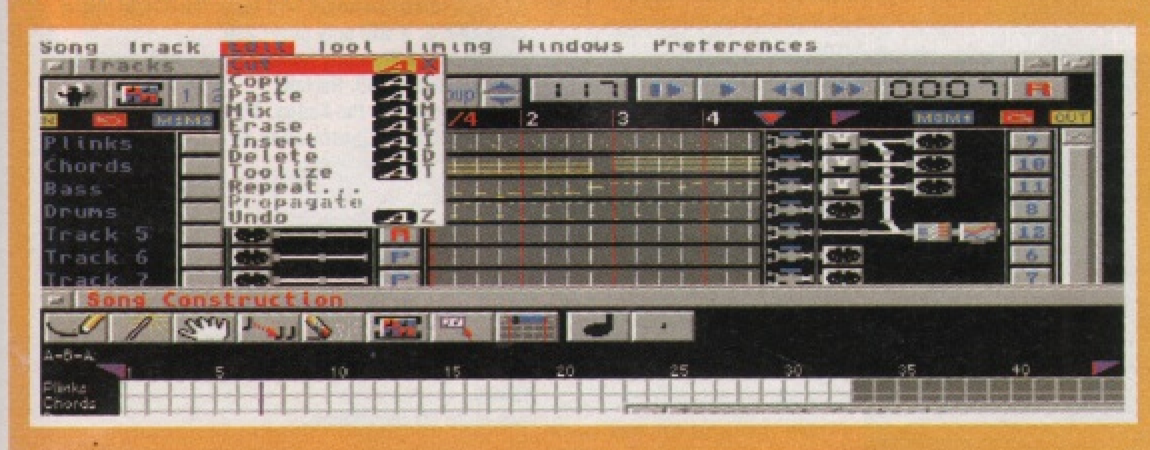


Although only runner up to *Cygnus Ed* as most useful utility of the year, even this shot of *Amiback* is more interesting than a picture of some text being edited...

SOUND
Winner: *Bars and Pipes Pro v2*

Runners up: *Deluxe Music v2, OctaMED v5, SuperSound 4*

It may have been a pretty lacklustre from the hardware point of view, but music software was thick on the ground. *Bars and Pipes v2* combined MIDI with multimedia in April and takes first place. The runners up all made the most of existing Amiga sound capabilities to excellent effect.



Combining MIDI music, Amiga samples and Amiga multimedia, *Bars and Pipes Pro* was the most interesting music program of 1993.

»

REVIEW OF THE YEAR

What a year! WHAT A YEAR! The CU Amiga team cannot remember a more productive or rewarding twelve months when it comes to Amiga games software. Here's our pick of the crop...

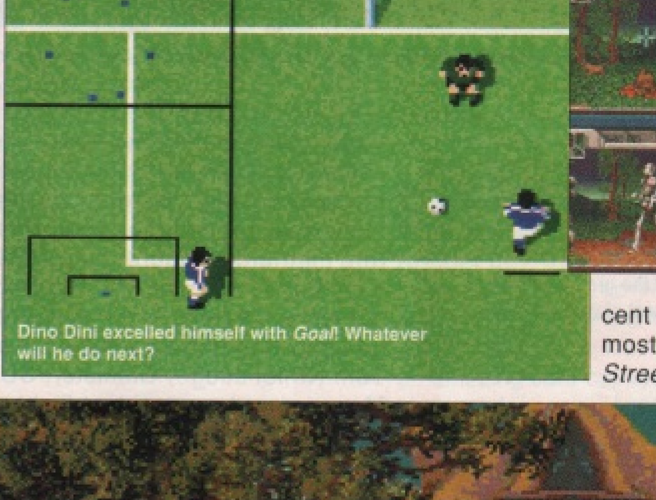


Syndicate is one of the most violent games we've seen. Great, isn't it?

What can I say! The best game released in 1993 has to be the awesome *Frontier*. Five years in the making, it received the absolutely enormous score of 97 per cent in November's CU, along with a six page review. The kind of game you can play for months without getting tired, *Frontier* is THE game of '93. Mind you, Bullfrog's *Syndicate* isn't too far behind. Hailed as one of the best games ever, this extremely violent mob shootout has you searching a city, blasting innocent civilians and generally re-enacting the most violent movies of your choice. Ninety-four per cent? Worth every one, in our opinion.

If helicopters are more your thing, then what about EA's stunning conversion of *Desert Strike*, surely one of the greatest Mega Drive games ever. Those Sega owners must have been turning in their graves when they realised that the 93 per cent rated smash hit was actually better on the Amiga! It had better explosions, better sound effects and better controls all round.

Speaking of better, someone else who topped their previous best was Dino Dini, who released *Goal!* through Virgin this year (after splitting with Anco and losing the *Kick Off* name into the bargain) to massive applause and bigger scores, raking in a massive 93 per cent.



Dino Dini excelled himself with *Goal!* Whatever will he do next?

For the less soccer minded, there was always *Sim Life* to fall back on. Reviewed back in May it was yet another game to score 93 per cent, and wins the award for being one of the most complicated simulations ever. Take a life form, and evolve it on an ever-changing planet. Strange, but true.

If adventures are more your cup of tea, you could always delve into the large and glorious *Ishar 2*. With over 400,000 views over a large variety of landscapes, this is one of the most challenging games to come out of France, and it also took a 93 per cent score home with it.

Terminator 2. Big guns, death and carnage - just don't tell the turkey!



Ishar 2 was described as one of the best Amiga adventures ever. Roll on *Ishar 3*!

Later in the year came a clutch of more traditional games. September saw the release of *Soccer Kid*, and with it the promotion of Krisalis software to the top of the league.

A fun platform game, it used a football in a way never seen in an Amiga game before.

And what about this month? *Mortal Kombat* and *Terminator 2* appeared – two red hot arcade conversions from Virgin games scoring 93 and 92 per cent respectively. One is the most hyped beat 'em up since *Streetfighter 2* and the other is one of the best arcade machines to hit the streets. Both of them have converted to the Amiga beautifully, and doubtless both will end up in many a stocking this year.

Hired Guns. Four player action the way it should be done.

1993 has to have been one of the best years for Amiga games ever seen. There are just far too many games to mention. How I would have loved to talk about the terrific Adventuresoft game *Waxworks*, which scored 91 per cent, or Team 17's *Body Blows*, the *Streetfighter* beater that also scored 91 per cent.



Mortal Kombat. The beat 'em up of the year. Possibly this Christmas' number 1?

I didn't even have time to catch up with *Hired Guns*, yet another 91 per cent title. With the new AGA machines beginning to take over as the base level for games, let's hope that '94 is even better. CU

THOSE THAT DIDN'T QUITE MAKE IT

Not every game released last year scored so highly. Here are the five that didn't quite reach the top of the charts...

1.	Covergirl Strip Poker	13%
2.	Super Sports Challenge	18%
3.	Bully's Sporting Darts	24%
4.	Super Cauldron	27%
5.	Firehawk	32%

CU AMIGA PREDICTS

1. Commodore will finally release their high end AAA machines. Maybe.
2. David Braben will appear with the first mission disk for *Frontier*, and it will stay at number one for months.
3. Someone will figure out how to keep 8Mb of RAM in the trapdoor without disabling the PCMCIA slot.
4. A sound card for the Amiga will be released.
5. David Pleasance will get his own chat show.
6. Alternative will create a game based on Kilroy.
7. A leading Amiga magazine will run an eight-page feature explaining how U2 write all their music on an A500+ with a copy of *Easy AMOS*.
8. GVP will release a board that turns the A1200 into a Cray XMP 2. It will only cost £230.
9. Commodore will finally release a high-density disk drive for the A1200. Hurrah.
10. True VR comes to the Amiga. The headset comes bundled with the *3D Construction Kit*.

WHAT WE DON'T WANT TO SEE...

1. Yet another David Pleasance interview.
2. The A300. (A bypass running through Hampstead Heath.)
3. Any more games with wacky balloon lettering.
4. Beat 'em ups where characters say unintelligible things.
5. Any more CD shovelware.


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Print Speed	6ppm	6ppm	4ppm	8ppm	6ppm
Straight Paper Path	-	NO	(ONLY FACE UP)	YES	YES
PCL 5 Printer Command Language	-	YES	-	YES	YES
HP-GL/2 Vector Graphics included	YES	YES	-	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	1Mb	1Mb	512K	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	33 secs	25 secs	<60 secs	60 secs	45 secs
First Page of Text Output		15 secs	31 secs	18 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Flash ROM Upgradeable Firmware	-	-	-	-	YES
PCMCIA Card Slot	-	-	-	-	YES
Scaleable Resident Fonts - in HP LJ III Emulation	0	8	0	8	8
Resident Bit-Mapped Fonts	10	14	2	14	14
AGFA Intellifont Scaleable Font Technology	-	YES	-	YES	YES
HP LaserJet III Emulation Included	-	YES	-	YES	YES
EPSON FX Emulation Included	-	YES	YES	YES	YES
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Standard Tray Capacity	200	150	70	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
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Able to print on OHP Film	YES	YES	YES	YES	YES
Able to print on 169gsm card (Manual Feed)	-	-	-	-	YES
Standby - Noise Level	38dB(A)	35dB(A)	<43dB(A)	<43dB(A)	<38dB
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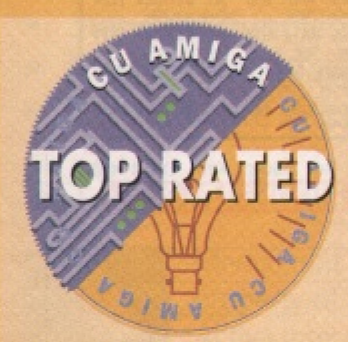
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GET SERIOUS

Woah hoss! What happened to all the games? You've just turned to the best tech' section known to man, and to prove it, this is what we've got on test this month...



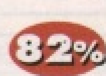
The CU AMIGA top rated accolade for non-games products scoring over 90%. They will definitely be worth the money and are likely to act as a benchmark for future releases.

INTERNAL XL DRIVE

Let's face it, 880K floppy disks aren't the mass storage medium they seemed to be when the Amiga was launched. With the rise of 24-bit graphics, enormous adventure games, expansive DTP files and the like, low density disks get more inadequate by the day. There are hard drives of course, but you can't take out your hard drive every time you want to exchange files with another computer. Power's 1.76Mb Internal XL drive could be just the solution.

The external version of the XL Drive has been on general release for a few months, but it's only now that you can get one that tucks neatly into your Amiga's beige box. Hooking it up is fairly simple for an internal job. There's really only one possible connector for each of the two contact points on the drive, so as long as you put them on the right way round, nothing much can go wrong. That's the hardware side out of the way, but there's also the question of the installation software. Before the Amiga can read and write to high density disks, you need to install a software patch onto your startup sequence. Apart from giving you greater capacity for your own files, the Internal XL also lets you read high density PC disks, expanding your compatibility further still.

Available from: Power Computing, Unit 8 Railton Road, Woburn Road Industrial Estate, Kempston, Bedford, MK42 7PN.
Tel: 0234 843388.
Fax: 0234 840234.
Price: £75.95 (£79.95 for A4000).





Kiss goodbye to puny 880K disks with Power's 1.76Mb PC compatible Internal XL drive.

MEGACHIP 2

You can upgrade your Fast RAM 'til you're blue in the face, but after the first half megabyte, it won't do anything for your sampling capacity. If, like me, you've struggled with the constraints of a 1Mb A500 for years, the prospect of a whole 2Mb of Chip RAM will probably seem like a massive luxury. Chip RAM upgrades have been available before, but they've had the disadvantage of turning off any trapdoor expansion you might need, which is where Power's Megachip 2 comes in.

In order to increase your Chip RAM, you need to increase the size of your Agnus chip. Unfortunately, this means that you can't just slot in a card – yes, it's screwdriver time I'm afraid. The Megachip 2 is actually a replacement Agnus chip. The instructions for installing it are adequate and encourage you to call Power's technical helpline if you have any doubts (there's one in the eye for the box-shifters). Installation involves locating your existing Agnus chip, prising it out, and slotting in your new one. A few trailing wires then have to be connected to the legs of a neighbouring chip. This shouldn't pose a problem as the relevant connections are indicated in the manual. Once you've done that, all that remains is to tuck everything away, put the case back on and power up.

You'll now find that some of your Fast RAM has been taken over but, most importantly, you'll have a couple of megabytes of Chip RAM to play with. The difference this makes to *OctaMED* or *Protracker* is stunning. Instead of being limited to modules of around 300K, now you can produce 2Mb monsters! Apart from the sound advantages, you'll have access to games that need extra chip RAM, and, if you're into graphics, you'll be able to use more colours at higher resolutions. This is just the thing to inject some new life into any tired old A500.

Available from: Power Computing, Unit 8 Railton Road, Woburn Road Industrial Estate, Kempston, Bedford, MK42 7PN.
Tel: 0234 843388.
Fax: 0234 840234.
Price: £159.

88%

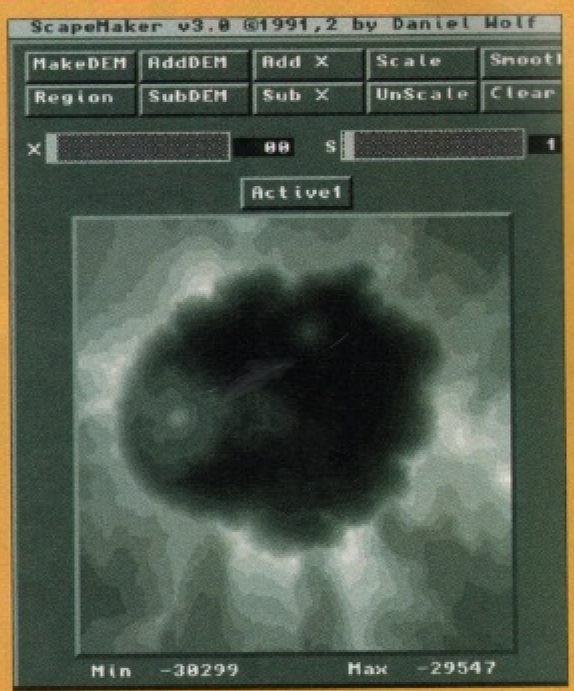


SCAPE MAKER

One of the biggest criticisms levelled at VR Laboratory's *Vista* fractal landscape generator, has always been its inability to convert IFF images to fractal scenery. Even the latest release, *Vista Pro 3.0*, still won't handle this all-important task. It may seem like a rather pointless thing to do, but imagine being able to generate an animation of an aircraft flying across a company logo that's raised up from a fractal generated landscape – even the guys at Industrial Light and Magic (they of *Terminator 2* and *Jurassic Park* fame) would be proud of an effect like that!

Not surprisingly, an entrepreneurial company has stepped in to fill the gap with the release of *ScapeMaker*, a utility that can convert either an entire image, or a small portion of an image into a *Vista* 'DEM' file, which can then be loaded into *Vista* and transformed into a fractal image complete with grass, snow, trees and even buildings. Obviously you'll need to own *Vista* to be able to take advantage of this utility, as *ScapeMaker* is nothing more than a conversion tool. It does, however, include a number of tools that will allow you to edit existing DEM files to make them smoother, and you can even merge an IFF graphic with a DEM, so that the IFF appears to blend in with a true fractal landscape.

Designing an IFF image for use with *ScapeMaker* is surprisingly simple. The easiest way is to design your graphic in 16 colours using a range of greys from black to white. Each colour represents a ramp level with white being the highest and black the lowest. Once you've imported the graphic into *ScapeMaker*, all you have to do is to mark the region of the image you'd like converted to a DEM, select 'MakeDEM' and the graphic will be converted. Unless you've smoothed the graphic yourself, the cliff edges will be rather harsh when the image is rendered in *Vista*, so it's worth smoothing the DEM to create more receding cliff faces. The results can certainly be pretty stunning, especially if you merge your DEM with an existing lanscape. *ScapeMaker* is the utility that the makers of *Vista Pro* forgot to write, and it should be at the top of every *Vista* user's shopping list. Highly recommended.



If you've ever wanted to carve your name in the hills of a Vista landscape, *ScapeMaker* is the utility for you.

Available from MegageM, 1903 Adria, Santa Maria, CA 93454, US. Tel:0101 805 3491104. Price: $64.95 plus $8 P+P. Ugrade : $25 plus $3 P+P.

80%

2MB AMIGA SMARTCARD

It's the size and shape of a credit card, and it can boost your A1200 or 600's RAM by 2Mb. It couldn't be simpler – all you do is plug it in and boot up. The PCMCIA port is the unassuming slot on the left-hand side of your Amiga. It's only 16 bits wide, so it's limited to passing 16 bits at a time, rather than the 32 that are spewn back and forth from the rest of the A1200's chips. The result is a very slight speed increase, but not half as much as you'd get with a trapdoor Fast RAM expansion (which generally would give a doubling in speed). In fact, it's unlikely that you'd notice any acceleration in normal day-to-day running, even though *SysInfo* clocks about a 20 per cent increase.

This is one of the cheapest ways of expanding your 600/1200's RAM. 1200 owners have the option of spending about £50 more for a 4Mb trapdoor board, while 600 owners can take the far cheaper option of a 1Mb trapdoor card for £35. Bear in mind that most trapdoor expansions will disable anything that's plugged into the PCMCIA port. Although in theory it's possible to daisy-chain peripherals that use the PCMCIA port, we've yet to come across any that come with through-ports. For example, you won't be able to use it in conjunction with Software Demon's *Overdrive* .

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79%



PCMCIA? That'll do nicely sir. 2Mb on a weeny credit card that slots into your A600 or a1200. Trendy eh?

Vidi 12/24 RT

The only trouble with Rombo's early low-cost digitisers was speed. None of them had what it takes to capture moving images. Mat Broomfield looks at the Vidi 12 and 24 RT, which should change all that.

CU AMIGA TOP RATED

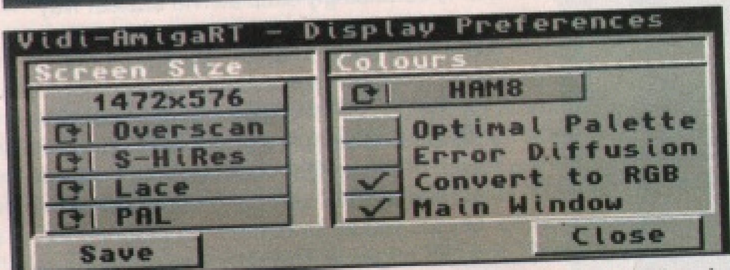
Rombo have dominated the budget digitiser market for years. Now they're raising their sights to take on the likes of V-lab. Have they done enough pre-fight training? Despite infrequent forays into other Amiga arenas, Rombo have more or less made their fortune selling low-cost digitisers. They started with Vidi Amiga, a package that needed a separate colour splitter for video work, or coloured filters if you were using a camera. Several years later, they released Vidi 12, a 12-bit device which was subsequently altered to incorporate AGA screen modes.

This digitiser sold for under £100, yet offered relatively good quality, and had a built-in colour splitter. Its only problem was that it was relatively slow to capture an image, taking nearly a second per frame to grab – at least 25 times too slow to capture a live full-colour video image.

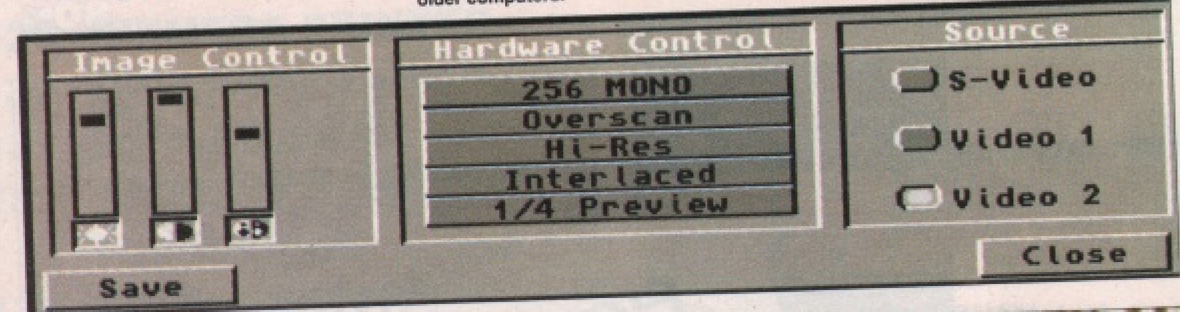
Their newest products are called Vidi 12 RT and Vidi 24 RT. The RT in the title stands for real time, so it won't take a great leap of genius to work out that they've finally overcome the limitation of speed, and can now capture an image in any Amiga resolution or screen mode directly from a moving picture source in as little as 1/50th of a second.



You can use Vidi's image processing options to alter images that you've digitised with the hardware, or you can load screens from another source. In addition to all IFF screen formats, the program can also handle PCX, TIFF and BMP image formats which are usually associated with the PC.



It's important to understand that the program can grab in a number of resolutions, but regardless of the capture resolution, you can still create an image in any Amiga screen mode. You can even save AGA screens on non-AGA Amigas, although obviously such images can't be viewed on those older computers.



AN OLD FRIEND

If you've used Vidi 12, the software accompanying Vidi 12 RT or Vidi 24 RT will be familiar, as it looks identical and includes many of the same features.

When the program loads, you're greeted by the main screen. At the right of the screen is a window that can be used to show the currently selected image, whilst at the left is a row of buttons which you can use to access the various parts of the program. The first of these buttons are used to define your grab and display preferences and are only accessible from this screen. This is where you can set up the defaults used each time you capture an image. This section includes the brightness, contrast and colour controls. You can also specify the type of image captured by the hardware. This is distinctly different from the displayed image.

For example, you can capture a low-resolution image, but display it in super high-res (on an AGA machine). Or you can capture a high-res interlaced image, and display it in low resolution. Vidi 24 can capture at a resolution of 720 lines, twice as high as standard TV, and equal to professional broadcast cameras. Vidi 12 manages half that resolution, which is quite adequate for digitising video.

Whilst you're grabbing an image, you will be shown a monochrome preview screen, and you can specify whether this preview should be in 16 or 256 shades of grey and whether it should occupy a full or quarter screen size. Non-AGA Amigas are not capable of 256 colour display. The smaller size gives faster screen updates, but, to be honest, even then the frame rate is very low (perhaps three to five frames per second) in 256 greyscale mode.

You can also choose from one of three video sources: S-VHS or two composite video sources. This is ideal because you can simultaneously connect the hardware to a camera and two VCRs.

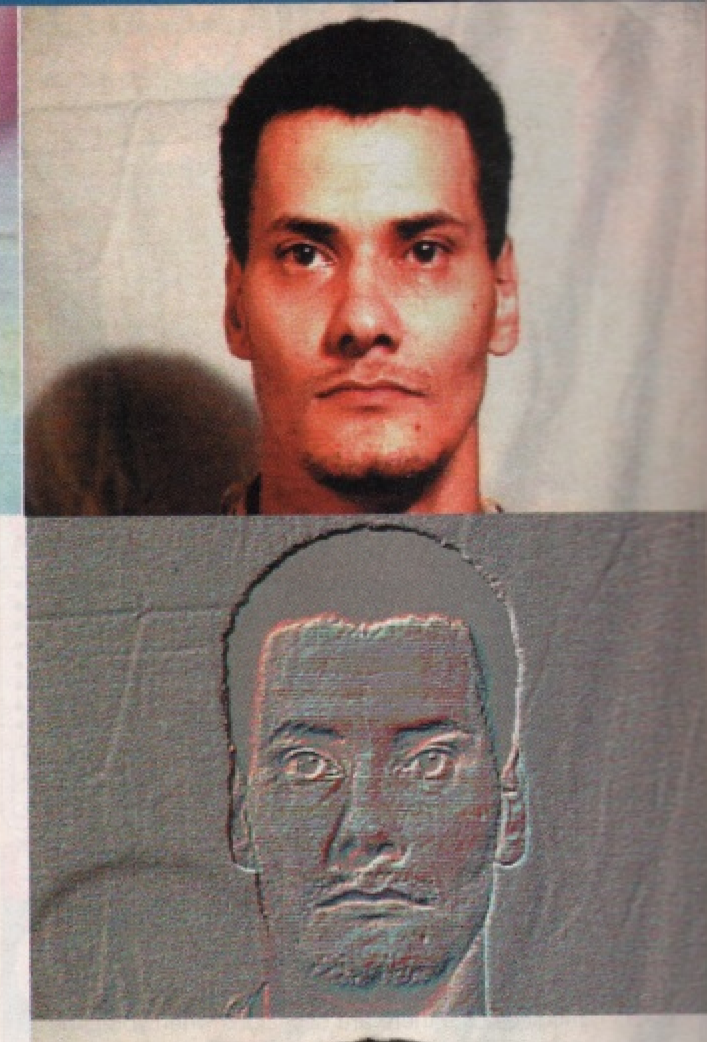
The display prefs window is where you can specify the way that the captured image is shown

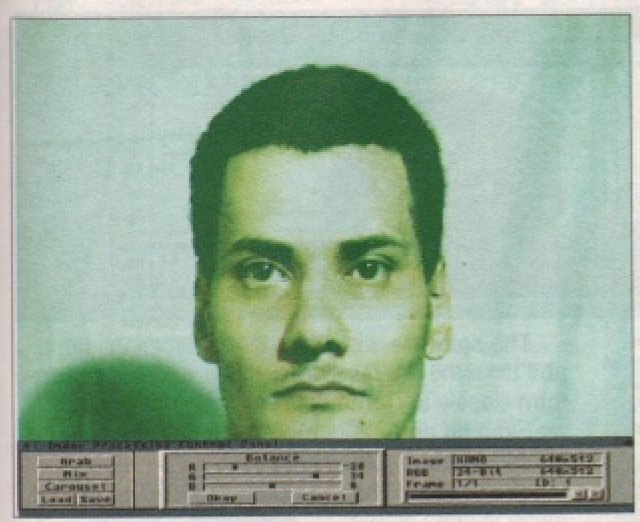
Most commercial video tapes are not of very high quality, but rental tapes usually provide a superior source of footage and the image is often more stable. Compare this clip from a rental copy of Hook, to the inferior sell-through Black Adder still shown elsewhere in this review.













Above left: The casing used by both VIDI 12 and VIDI 24 is small, but not small enough to leave the serial port free for other peripherals.
Above: Beneath the case is a two-tier circuit board, with the components "piggy-backed" on a pair of well-designed cuircuits.

THE DIFFERENCES

Although you might infer from their names that Vidi 12 RT is only capable of 12-bit digitising, in fact both boards offer 24-bit colour. The only difference between them is in their capture resolution. Vidi 24 can capture at a maximum resolution of 720x576. Vidi 12 can only manage 360x576. Both versions can display in all Amiga screen resolutions but any screen mode above the maximum capture resolution means that the additional pixels must be interpolated from existing data. This means that the image is not a 100 per cent representation of the original.

on the screen. You can choose from any of the Amiga's screen and palette modes ranging from two-colour low-resolution to HAM8 Super High Res. Because the same software is designed to work on all Amigas, you are given the option to select display modes which non-AGA machines can't handle. If you choose such a screen mode, the image can still be saved, but will not be displayed in colour. In fact, on the main edit and view screens, the image won't be displayed at all, whereas the carrousel and main windows will show a greyscale representation.

So anyway, you've selected your preferences, now you can go to the grab screen where you'll capture an image. You can specify whether the grab should be in colour or monochrome, and you can also reselect your video source. You can even choose time-lapse digitising, with intervals ranging between half a second and six hours. And if you're really getting creative you can rig it up to take a shot each time a switch is triggered, making it ideal for certain types of security and surveying work.

Although similar to earlier versions of the software, there are a number of omissions from this section. The only notable AWOL is the facility to capture a single colour component – red, green or blue – although this is not too important as you can always extract the required component later. The easiest way to capture an image is to select Colour and Auto, then click the Grab button when you're ready. The image will be captured as three separate screens, one for each of the red, green and blue colour planes. These are then combined and output in the display mode of your choice.

Unfortunately, this mode of operation presents one serious limitation, and that is the fact that you need space in RAM for a full 24-bit image plus whatever the displayed image will be. This means that you can run out of memory extremely quickly.

If you have Auto selected, once an image has been captured, the three RGB components will be combined and a screen of the specified screen mode will be created and stored in the carrousel.

ROUND AND ROUND WE GO

The carrousel is like a slide viewer. It can store as many frames as you have memory for, and you can view them individually or one after the other. You can also save screens and animations from here, and it even lets you import and export images in the PC's BMP or TIFF formats. A PCX loader/saver is also planned. It's important to note that you can also save your pictures as 12-bit or 24-bit images, regardless of the mode they're displayed in.

POWERFUL PROCESSES

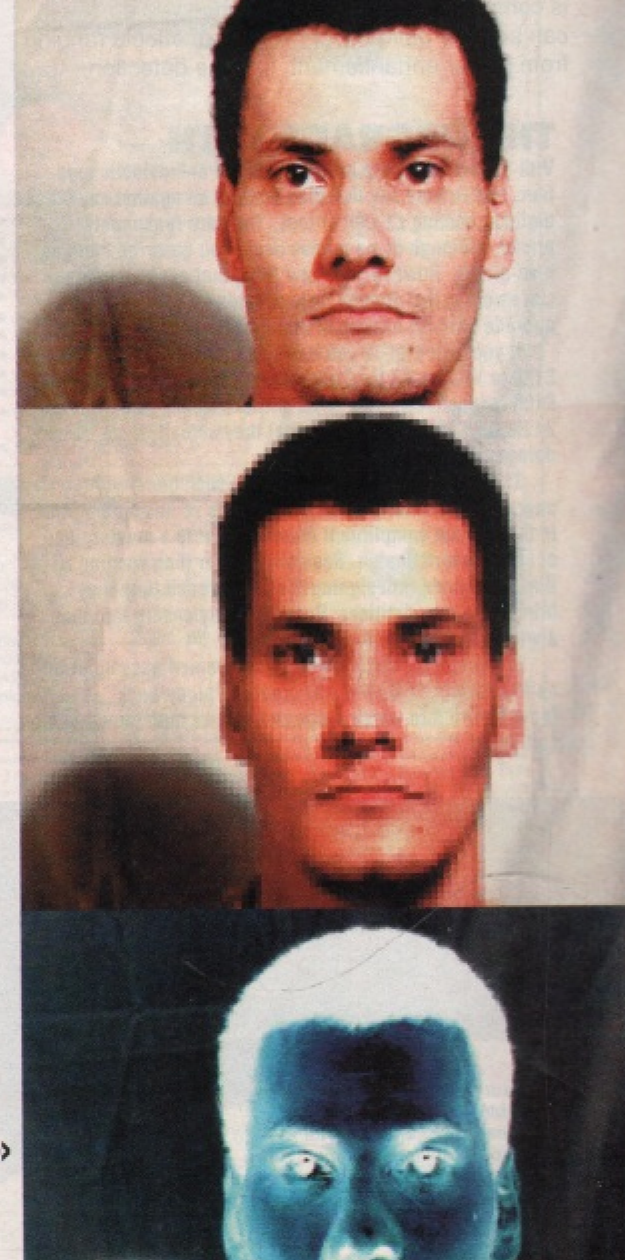
The program also offers a good selection of image processing tools. In fact, this is one area that gets better each time the software is updated. I wouldn't »

RAMMING THE MESSAGE HOME

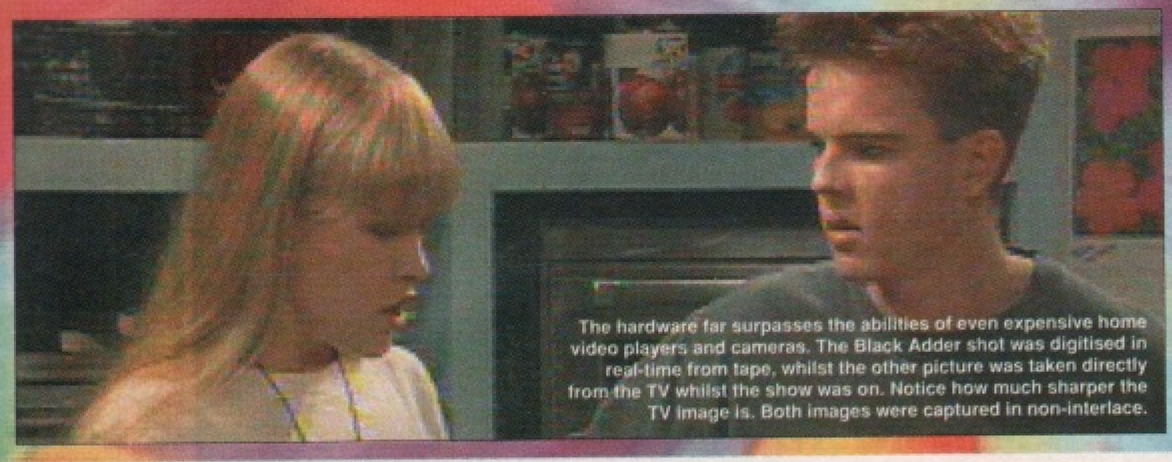
One of the program's greatest shortfalls is the way it chomps up your free memory. Even on a 6Mb A1200 I constantly ran out, and at times it was only possible to store one frame in RAM. I think that given its RAM-hungry nature, Rombo should definitely have incorporated a virtual RAM feature whereby you could use a hard drive, or even a floppy disk as additional temporary memory. Considering the program's relatively low price point, it seems a shame that it needs additional memory to get any real usability out of it.

It also doesn't fully reclaim RAM that it has used and finished with, so if you digitise a dozen pictures and delete them all from its memory, you may still have to reload the software because you no longer have sufficient RAM to work with. This is actually a fairly well documented problem, known as fragmentation. Many applications require contiguous (all in one chunk) memory to work.

Unfortunately, each time you delete a picture with Vidi 12 or 24, the memory gets broken down into little chunks, so although all of the memory is being returned to your system, it is no longer contiguous and therefore can't be used.



Right **Here are a few of the program's more obvious image processing options, but there are more powerful ones in reserve. You'd think Mat could have smiled though.**





The hardware far surpasses the abilities of even expensive home video players and cameras. The Black Adder shot was digitised in real-time from tape, whilst the other picture was taken directly from the TV whilst the show was on. Notice how much sharper the TV image is. Both images were captured in non-interlace.

» be surprised if we saw Rombo releasing some kind of standalone image processing package in the not-too-distant future.There are now 24 different operators, and, although some of them do really boring things like Flip-X and Flip-Y, there are some complex and useful options too. What makes these options powerful is the fact that they can be applied to either the current image, or all selected frames – ideal if you want to image-process an animation!

The options themselves have been greatly enhanced as well. Now, rather than simply giving you a name that you click on to perform a predefined operation, a requester appears asking you to further specify how the effect is to be applied. In most cases, this simply means moving a slider to indicate the degree by which the image should be modified. But there are occasions when you can actually define the way that the effect will work.

Convolve is the most vivid example. Although it is complicated to understand, once you do, you can actually define your own set of effects ranging from colour enhancement, to edge detection.

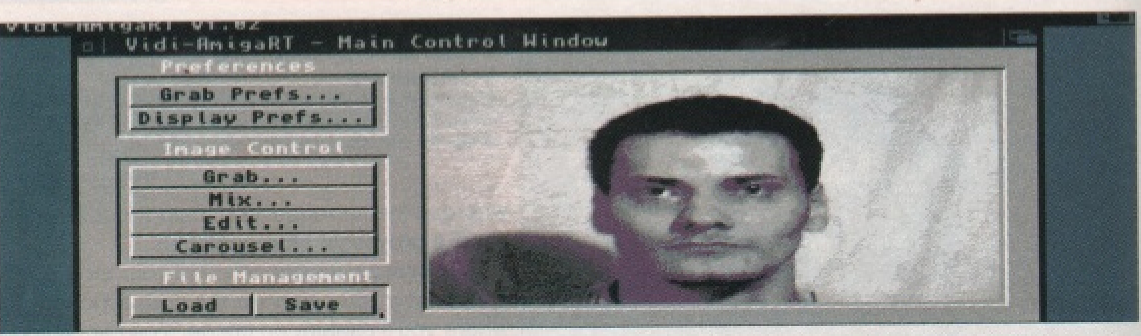
THE UPGRADE PATH

Vidi 12 and 24 RT are great fun for the enthusiastic amateur, and Rombo say that they'll stand up against any other digitiser costing £1,000 or less. They are reasonably priced, although by no means could you describe them as give-aways. However, the one thing that eases the financial strain is that Rombo have provided a very easy upgrade path for owners of either of the Vidi 12 products.

If you own Vidi 12 you can swap it for Vidi 12 RT for £129 or Vidi 24 RT for £199, giving you a saving of £80 and £100 respectively. Vidi 12 RT owners can upgrade to Vidi 24 RT for £99, which means that they actually save £1 by doing it this way!

The reason that Rombo can offer such generous upgrades is because their new board is so easy to upgrade. In fact, I must compliment them on what is a masterpiece of circuit board design. Basically, rather than wasting zillions of pounds redesigning the casing each time they bring out a new digitiser, Rombo simply ensure that they always fit inside the existing design.

In the case of the RTs, they also wanted easy upgradeability, so what they did was create a 'piggy-back' (daughter) board which plugs and screws onto the main circuit board.



A greyscale preview of the current screen is displayed in the main window, although this can be switched off if you prefer. In fact, a marked improvement over previous versions of the program is the facility to interrupt or abort any option before it's complete. Especially handy when you consider that some of them take several minutes to complete.

CONCLUSION

Initially I found Vidi 12/24 RT is a bit of a disappointment after having waited so long, and having heard so much hype about it. It seemed to suffer in three major areas:

1. It uses too much memory.
2. It can't grab colour sequences in real time.
3. The image clarity doesn't seem too great, even compared to Rombo's own earlier Vidi 12 digitiser.

It was only when I phoned Rombo to moan, that I started to appreciate just what a remarkable feat they have achieved. The problem with memory is a natural side-effect of working with 24-bit images occupying nearly 1Mb each. As for grabbing real time colour sequences, Rombo pointed out that such a feature would require a unit capable of digitising and storing to disk 25Mb of data a second! As there are no drives that can write that fast, it comes as little surprise to learn that there are no home or semi-pro units capable of real time 24-bit sequence capture.

My final grouse was caused by the fact that I was digitising in interlace mode. Because of the way this mode works I was getting motion artifacts which manifested themselves as a blurred image. As soon as I dropped the hardware capture to non-interlace, the problems went away.

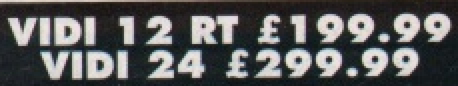
At £199 I think that Vidi 12 RT is the cheapest real-time 24-bit digitiser in the world, and it's the only one for the Amiga that doesn't need a big-box machine such as the A1500 or 3000.

The software is slicker than previous versions, and I like the user interface which appears to conform closely to Commodore's design guidelines.

Even on an A1200, mixing the RGB components to create screen images is a very slow business, and using the special effects in the Edit menu is even worse.

I think it would be fair to say that regardless of the computer you use it on, most of your time will be spent waiting whilst the software modifies your images.

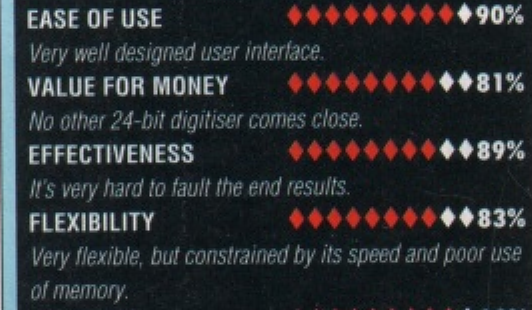
It offers a good entry point to the world of real time digitising, but I strongly suggest that if you're interested in the 24-bit model, you try the 12-bit version first – that might be enough for you.



VIDI 12 RT £199.99
VIDI 24 £299.99

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
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EASE OF USE	90%
Very well designed user interface.	
VALUE FOR MONEY	81%
No other 24-bit digitiser comes close.	
EFFECTIVENESS	89%
It's very hard to fault the end results.	
FLEXIBILITY	83%
Very flexible, but constrained by its speed and poor use of memory.	
INNOVATION	92%
The technology's old hat, but the implementation is really something to shout about.	

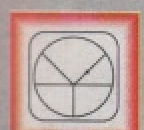
> *It takes a while before you really appreciate what exceptional value this represents, but once you do, you'll be laughing all the way to the bank.*

OVERALL 91%



This picture shows the remarkable resolution and quality that's possible with Vidi 24 RT. I simply plonked the camera down next to my cat Spud, called his name, and the instant he opened his eyes I captured his sanguine expression in full interlaced overscan.

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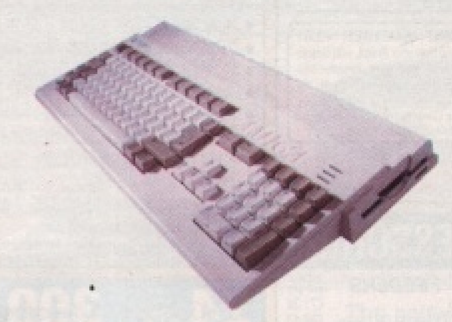
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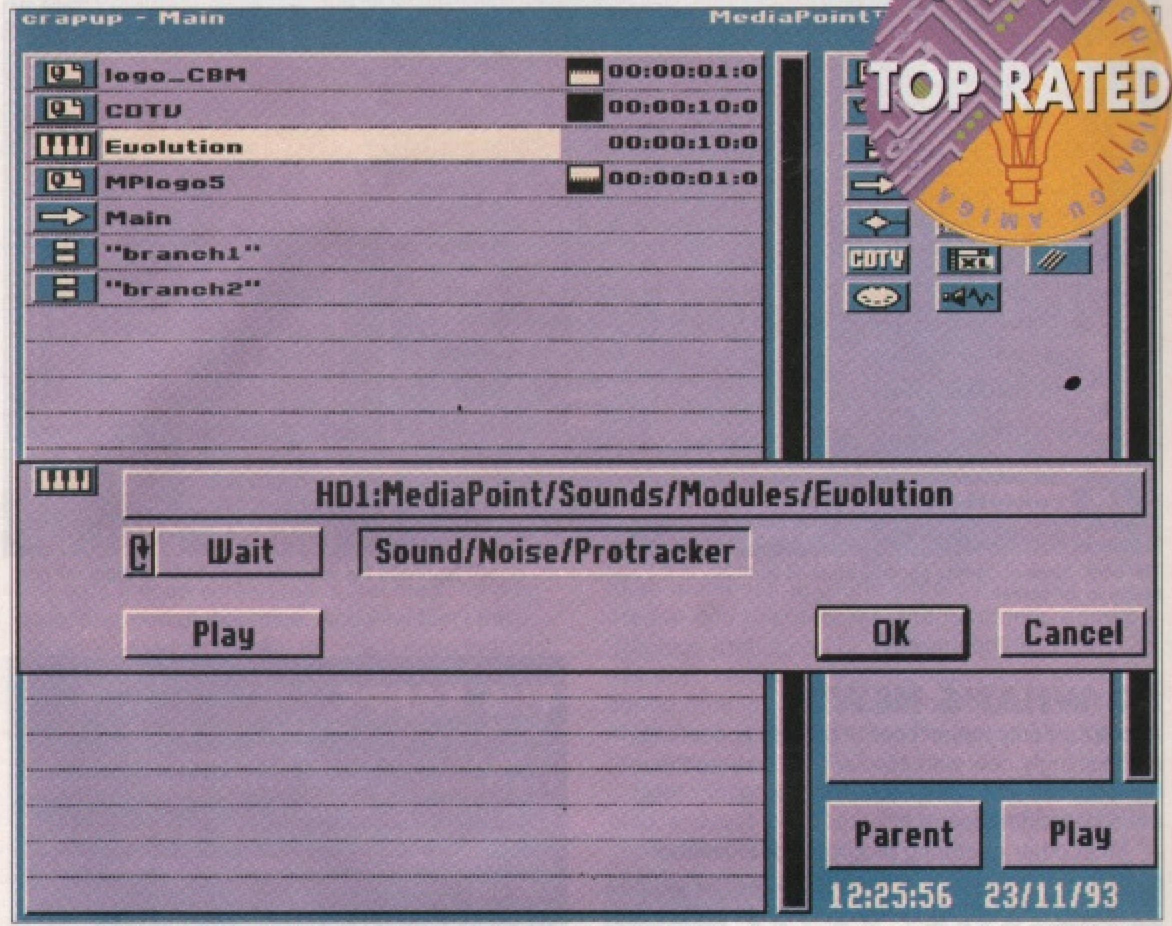
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MediaPoint

Ever wondered what the makers of *Real 3D* do on their day off? John Kennedy discovers that rather than lie around the house all day they have entered the interactive world of multimedia.



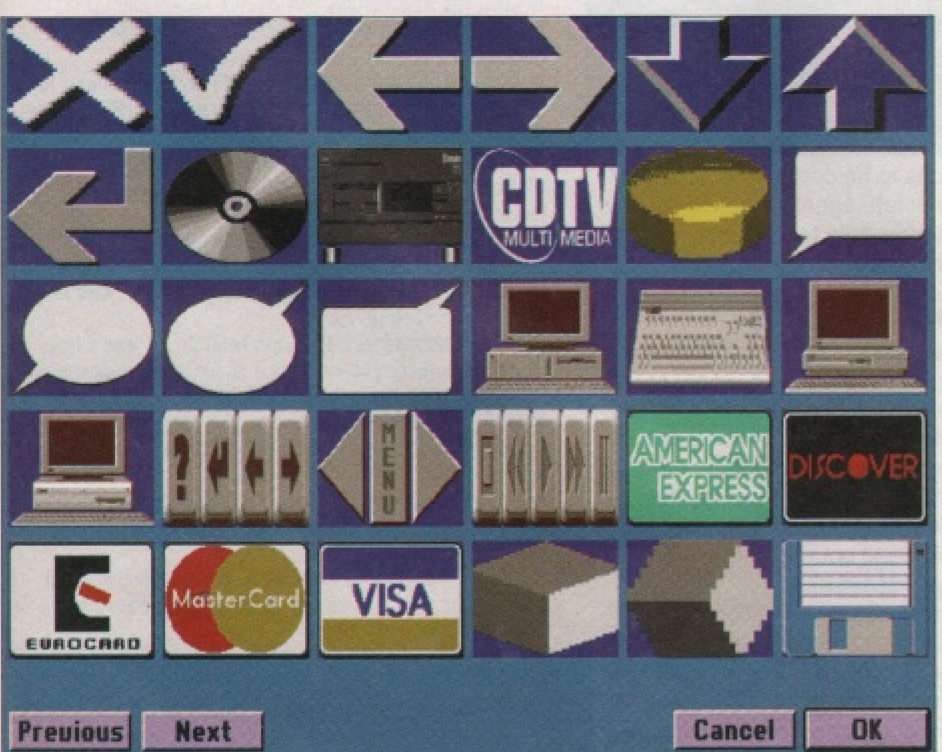
Each icon on the right is a possible action, and when dragged into the script on the right they create a sequence of events. Here the soundtrack for the presentation is being selected.

I don't particularly want to review Activa's latest baby, and I'll tell you why: I'd rather no one else knew about it. I'm hoping that you won't notice the rather attractive screen shots on this page, and my carefully-crafted text will entirely pass you by. In fact, I demand that you skip this review completely and move on to the Back Chat page, which is rather good, as I'm in it this month.

MULTIMEDIA MAGIC

Now that I'm alone, I'm at liberty to waffle on to myself about *MediaPoint*, safe in the knowledge that no one else is going to steal my ideas, because after playing around with *MediaPoint*, I've got lots of new ideas. Now I know how I can use the Amiga to actually do something useful for a change.

Once upon a time, someone thought of 'multimedia' and it's still the magic word in computer land, mainly because it can mean exactly what you want it to mean. To me, multimedia is an interactive and informative blend of text, pictures, animations and sound, and Activa International Inc seem to agree with me because that's exactly what *MediaPoint* creates. The easiest way to describe this program is to think of an incredibly easy-to-understand programming language. Think of a language that will load and display a picture in any mode without fuss, add text anywhere on the screen and play a sound tracker module in the background whilst waiting for the user to press a key or click on a gadget. Even better, think of a language that offers all this in an intuitive point and click environment and also supports a huge array of extra hardware. Now you have a good grasp as to what *MediaPoint* is all about.



The picture file requester offers miniature thumbnail sketches to give you an idea as to what each file looks like. Very handy.

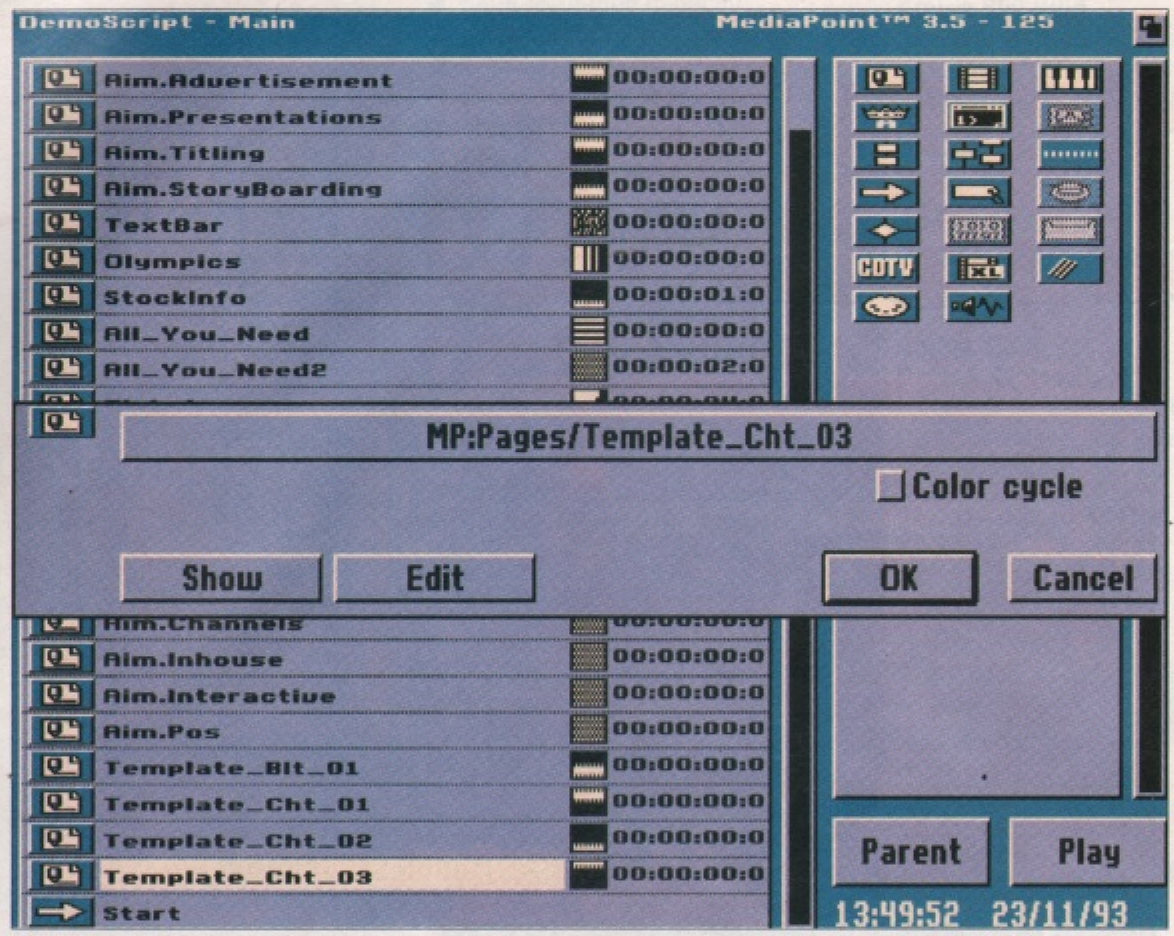
SCRIPTING EXAMPLE

Here's a simple example where *MediaPoint* would be very useful. Now remember, I'm talking to myself here so don't run off and do this – it's my idea. Imagine you run an estate agent, and you want a useful window display, something a little more eye-catching than bland photographs of suburban nightmares. Using a still-video camera, you take lots of photographs inside and around your houses. Then you digitise them with V-Lab or some such, and store the pictures on a hard drive. Also on the drive you put *MediaPoint* running a script which displays the houses in a main window, their features down the side and finally the price. Your easy-to-pay, budget plan, low-finance mortgage rates also flash up on screen occasionally.

Using a touch screen device, and an *ARexx* driver, you then offer passers-by the ability to select a house and even take a little guided tour (with soundtrack) by means of the keypad. If they choose, they can enter their telephone number and in the morning you can call them to make an appointment.

It would take an hour or so to write the script using *MediaPoint*, and the system would pay for itself in one sale. That's exactly what multimedia is all about.

»



The small black and white squares stacked vertically in the centre of the screen represent the different wipes used to bring the new image to the screen.

SO WHAT'S NEW?

Activa certainly haven't come up with something astonishingly new with *MediaPoint*, instead they have looked at the previous efforts and improved them beyond measure.

Most other authoring programs offer limited support for animations and sound, but *MediaPoint* covers just about everything. All normal Amiga ANIM file formats are covered, including the new and improved ANIM7 format which wipes the floor with the older versions when used with 68020 and better processors. As the AGA chipset permits some exceptionally detailed animations, ANIM7 is essential for decent frame rates. *MediaPoint* will spool anims directly from hard disk and if you lower the frame rate slightly, it can do it without any sudden jerks as well. I'd give the editor's right arm to get a chance to play with a SCSI2 drive, as the results would be very impressive indeed. *[Thanks John, I'll remember those kind words whne it comes to pay day. – Ed.]* Sound samples can also be spooled directly which means your host system doesn't need to be crammed to the gills with expensive RAM chips in order to play back lengthy samples, such as general greetings or narrations. What marks *MediaPoint* out from the crowd is its support of external hardware by means of its unique Xapps (eXternal APPlicationS) protocol. A Xapp is a code module which can be used to control any extra piece of kit, the idea presumably being that manufacturers will include Xapp files themselves.

For example, the CDTV Xapp allows control over the playback of audio CDs. The CDTV player can either be part of the host hardware (that is, the *MediaPoint* program is running on a CDTV or A500 with A570) or connect via a serial link. For example, my A4000 is linked to a CDTV, and with *MediaPoint* I can use my Pink Floyd collection to add a synchronised soundtrack to my animations. As *MediaPoint* works in its own time system or in SMPTE/EBU or MIDI time, synchronisation is frame accurate. The scheduling system also allows specific actions to be carried out at certain dates or times. The estate agent's window display could display a half price sale for half an hour every alternative Thursday at 2am if desired.

THE XAPPS

MediaPoint interfaces with other pieces of hardware by means of Xapps (or eXternal APPlications) code modules. Each peripheral requires its own Xapp, which provides control over the various features.

Active supply several Xapps as standard, and will happily provide details on how to write your own should the need arise.

XAPPS ARE PROVIDED FOR:
CDTV – provides control for playback of audio CD disks.
CDXL – plays sound and animation files in CDXL (AGA) format
ION – controls the Canon RV321 Still Video Player
IV24 – extensive control over the GVP 24bit graphics system.
MIDI – plays standard MIDI files
Studio 16 – when used with the SunRize AD516 or AD1012, provides CD quality sound from hard disk.
VideoDisc/VCR – interfaces the Amiga with several compatible video disk and tape players.

SLICK AND SMOOTH

Using *MediaPoint* is a pleasure, and the software has a tremendously solid feel about it. Some programs simply inspire confidence with their sensible menu layouts and clear displays, and this is one of them. The slickness permeates throughout the software. Each new screen image or object can be displayed through 50 different transitions or wipes. Pictures can melt, split and bounce onto the screen whilst logos can spin and dissolve.

Creating flashy business presentations is ridiculously easy, and it's hard not to get carried away and turn the entire episode into a fully fledged news program. For low-level control, the scripts generated as you click and drag icons can be edited, or even created, with a standard text editor. In this way you can ensure your presentation hasn't a pixel out of place, and making full use of an AGA chipset means the pixels look stunning. You don't need an AGA A1200 or A4000 to use *MediaPoint*, but you will need lots of memory and hard disk space. The barest of minimum systems will have 2Mb of Chip RAM or 1Mb of Chip RAM and 2Mb of Fast RAM, with Kickstart 2. But any program which depends heavily on graphics and sound will work best with a hard drive and 6Mb of memory. The ideal system would be a well-equipped A4000 used for authoring the systems, and a A1200 with a hard drive used for displaying them.

COOL STUFF

Some particularly cool features which I couldn't forgive myself for not mentioning include support for CDXL, the animation and sound format originally developed for the CDTV player. Now we have the AGA chipset, CDXL is going to become even more important, and this is one of the few programs to support it. CDXL offers very reasonable live video playback without the need for an MPEG chip, and if used properly I firmly believe it will revolutionise Amiga software.

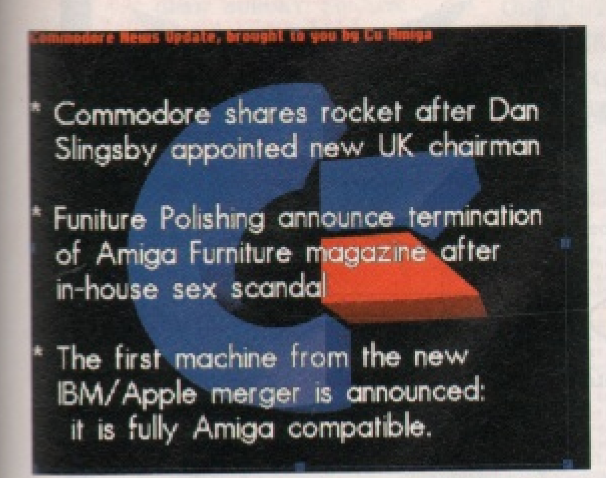
I successfully played back some CDXL files pinched from a passing CDTV disk, and enjoyed the option to quadruple the screen size. But of course CDXL support isn't for everyone – and it won't be until there is an inexpensive method of capturing the necessary video and sound data. However, the fact that it is supported is good news for the Amiga community as a whole. If you create a standalone multimedia terminal using *MediaPoint* (another one of my ideas, so don't bother) you'll be delighted to know that there is an optional comms link feature. This means that as long as the terminal is connected to a standard telephone line via a modem, you can completely revise and update the presentation from the other side of the world. *MediaPoint* comes with a free playback module, which means you don't need to worry about any license arrangements.

TOO PERFECT?

Is this the first item of Amiga software to get 100 per cent overall? You might have got that impression from the previous text, but so as not to insult

JARGON BUSTERS

- AGA: The new Amigas (the A1200, A4000 and CD32) feature the 'advanced graphics architecture' chipset, which means more colours and higher resolutions
- ANIM7: The Amiga's IFF standard file format allows for internal variations, and that's exactly what ANIM7 is. Normally animations are saved using the ANIM5 format, but with the advent of more powerful 32-bit processors (68020 and above), the new ANIM7 format goes a lot faster.
- CDXL: The file format used to package up sound and 'live' video for playback on the CDTV. Although only a quarter screen, the quality was acceptable and now, with AGA, CDXL is even better.
- CDTV: Commodore's Dynamic Total Vision was a flop, which now means you can pick it up for a song and connect them to your Amiga as a CD-ROM drive.
- MED: The only Amiga program Tony Horgan could not live without. MED is a music editor which allows songs to be constructed from Amiga samples.
- MIDI: The Musical Instrument Digital Interface allows an Amiga to record, edit and play back sounds from a home or studio keyboard.
- MPEG: The Motion Pictures Expert Group decided that this was the standard used to compress full mbtion video onto CD-ROMs.
- Multimedia: Anything you want.
- SMPTE: Society of motion picture and television engineers – another standard put together by an 'expert group'.
- Xapps: MediaPoint uses Xapp (external application) modules to interface with extra hardware.



MediaPoint is very good at quickly generating displays. The text and background are completely separate, and each can be moved by itself.



Interactive shop window displays are only the beginning... Just wait until writeable CD-ROMS and CDXL start to take over.

Allah by being perfect, Activa have woven some tiny imperfections into the tapestry that is *MediaPoint*. Or to put it another way, there are a few bugs and omissions.

For starters, the sound module playback doesn't support MED files, which is a pity as MED is probably the most popular tracker on the planet. As both MED's player and *MediaPoint* support *ARexx*, there are ways around this of course. Unfortunately, the MIDI file support is also a little suspect – basically it didn't. Certainly any MIDI file that I created with *Bars and Pipes* got the thumbs down.

Animation support was also slightly ropy, as one of my large animations consistently crashed the entire system, as did pressing escape at the wrong time whilst previewing a screen. I did seem to hit the old Recoverable Alert followed by Software Failure screen rather too much for a finished program of this price. And why can't the mouse pointed on my A4000 reach more than half way across the screen?

I can forgive these shortcomings because the Xapps system means that it's only a matter of time before these bugs are fixed – hopefully by the time you read this. I can also forgive Activa because of the enormous amount of clip art and sound samples they supply – it takes an hour or so just to look and listen to everything.

THE COMPETITION

Multimedia on the Amiga is nothing new, in fact it started several years ago with a program called *Deluxe Video*.

Since then we've had *CanDo, Hyperbook, AmigaVision, Scala* and *Helm* which had met with varying degrees of success.

CanDo and *Hyperbook* are geared more towards generating application software than presentation systems, although the new AGA compatible *CanDo* might redress that.

Scala and *AmigaVision* are both good multimedia systems (a new version of *Scala* is imminent, and will be mosy viciously fought over in this office), and Helm falls somewhere in between.

In my opinion, *MediaPoint* is the slickest of all the packages available allowing some extremely attractive and powerful displays to be created within minutes.





CONCLUSION

Just as *Real3Dv2* is the ultimate image rendering program, so *MediaPoint* is the best multimedia authoring program around. The support for every file format under the sun, the easy to use icon-based scripting system, and the excellent stock of clip art mean that this program will take a lot of beating.

It's amazing that one program could appeal to so many users. Demo writers can use *MediaPoint* to create hip and happenin' demos, graphics freaks can use the animation spool system to record directly to video tape with sound effects, and information engineers like myself can use *MediaPoint* to (hopefully) make their fortune.

Multimedia is where the Amiga has a strong hold, and with programs like this, it's only going to grow stronger.

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EASE OF USE 89%
Point and click and drag and watch. Script editing isn't fun though.

VALUE FOR MONEY 75%
High price aims it squarely at developers. A cut-down home (cheap) version is definitely required.

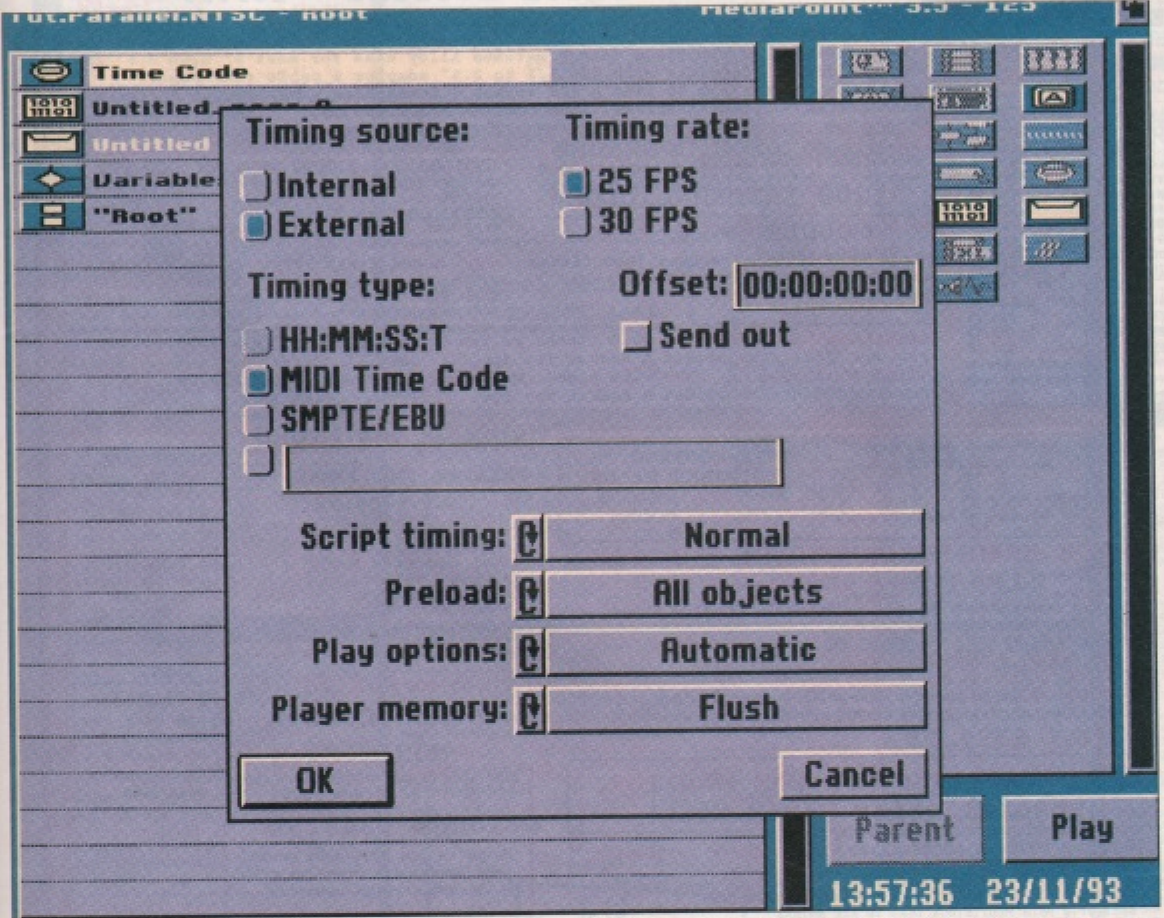
EFFECTIVENESS 97%
Excellent. Very slick, very professional results.

FLEXIBILITY 96%
Supports just about anything, including new ANIM formats and CDXL.

INNOVATION 86%
Nothing very new, just better.

"Geat product . This is what multimedia is all about."

OVERALL 90%



Timing can be set to be internally or externally generated. Using multiple Amigas sync'ed with a MIDI clock, it would be relatively straightforward to make a huge video wall of monitors.



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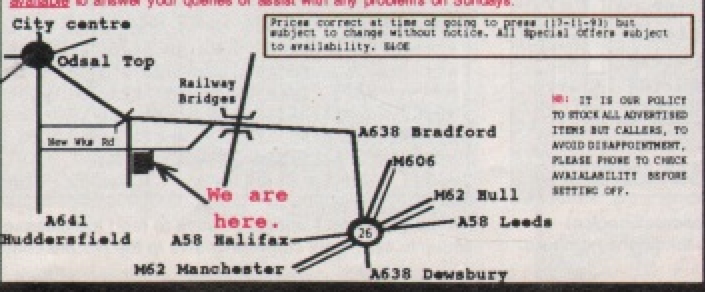
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Nicola

As a CIX user, your phone bills are probably much higher than they need to be. *Nicola* can reduce them by a massive amount, and make your CIX usage more pleasurable.

JARGON BUSTERS

- Binmail – Stands for Binary Mail. Using the private mail area of CIX you can exchange data with other Cixen. This can be anything from 50 bytes of code, to entire programs occupying 50Mb. Any data (except messages) which is exchanged via the private mail system is known as binmail.
- Cixen – Collective noun for CIX users.
- Conference – An area on CIX where people can talk about subjects that come under the same general heading.
- Download – To transfer data from another computer or on-line service to your computer or storage area.
- On-line – To be connected via the phone lines by computer to a bulletin board or conferencing service. On-line only refers to the time when your computer has established a link with the other terminal. As soon as that link is broken you are considered to be off-line.
- Off-line – See On-line.
- Post – The action of making a posting.
- Posting – A message on a bulletin board or conference service.
- Topic – A sub-division of a conference. Where people with more specific interests go to talk. The Amiga conference includes topics on video, CD32, software and games, for example.
- Upload – Transfer data from your computer to another computer (or bulletin board/conference service) via the phone.

In case you're not aware, CIX stands for Compulink Information eXchange, and it's one of the biggest bulletin board services in Britain. Users pay a by-the-minute rate for going on-line and talking to other Cixen (as users are called) as well as having access to thousands of megabytes of free programs and data, ranging from games to business programs.

The trouble with CIX is it's so interesting you can easily run up huge bills as you wander around the system talking to people and reading messages. Worse still, you're running up not one bill but two: one with the phone company and the other with CIX management.

Nicola offers an elegant solution to the problem. It lets you do all the time-consuming stuff off-line, then when you actually log on, it automatically does everything for you: sending mail, downloading files, posting replies and performing all the little house-keeping jobs that cost so much in phone time.

The program has a neat *Workbench 2* front end from which you can control all of its numerous functions. Before you can use it you'll need to configure it both for your modem and the way that you use CIX. This can be a tricky business, but if you already log onto CIX using *NComm* most of the work has been done for you because you can simply import your *NComm* settings into the program. I suggest that if you are are brand new to CIX, you learn how to log on using *NComm* first; in that way you're not tackling two new and relatively complex environments simultaneously.

You can of course send text and Binmail via Nicola to say nothing of downloading files from CIX.

Another part of the set-up procedure involves entering your unique registration details in the form of an ASCII file. This is imported into the program where it validates the program so that it can be used. The actual program itself is already on CIX and can be found in the Files topic of the *Nicola* conference from where it can be freely downloaded. Better yet, so confident is its publisher that you'll want to continue using the program, you can even obtain a licence which lets you use it free of charge for a month, after which you must pay the £34.99 registration fee.

Once *Nicola* is ready to run you can set up your preferences for the program, specifying everything from your CIX password, to the way the program prints. This is done via a series of menu items in – surprise, surprise – the Preferences menu.

With the program running you can choose to view the messages in two ways. The default is the command line window which tries to emulate the CIX parser. This means that if you're used to the way that CIX works, the transition to *Nicola* will be relatively useless. Mind you, that's just as well because the manual that comes with *Nicola*, despite being well-written, is very poor for beginners, being more of a technical reference than a 'take you by the hand' guide.

At the top of the screen is a jam-packed menu bar, whilst the main portion is occupied by the conference window. At the bottom of the conference window there's a cursor ready for you to enter commands, and the right-hand side of the window is occupied by a scroll bar that lets you view any previous messages that you may have looked at in the current session.

DON'T FORGET...

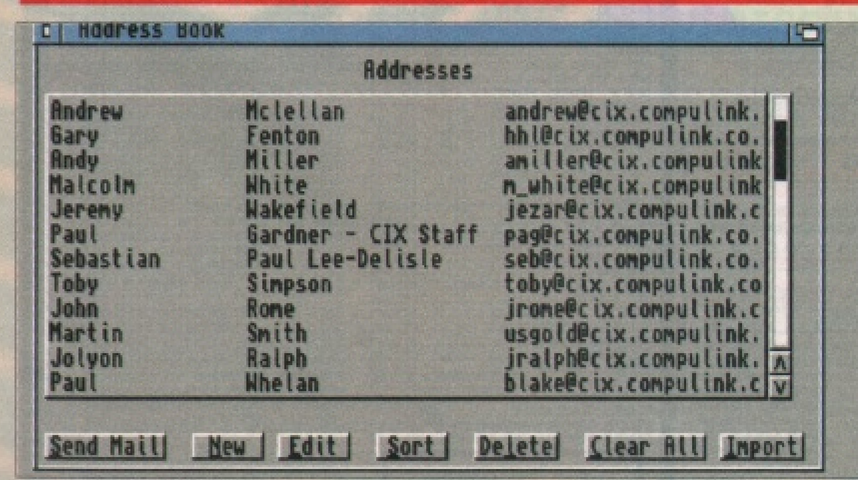
If you're one of those people who always comes up with a witty reply half an hour too late, not to worry, *Nicola*'s got that covered thanks to its 'To Do' list. If at any time whilst your reading a message you want to comment on it, but can't do so immediately (perhaps you need to research your answer, or you're simply too busy) then you can easily mark the message 'To do'. It will then be added to a special list of messages which you can check when you're ready to respond.

Nicola understands the same basic command set as CIX, so you can use JOIN to join a conference, SWITCH to change topics and so on. When you want to log on to CIX, you'll need to use the CONNECT option.

Once this is selected *Nicola* automatically logs on to CIX for you, and goes through the entire entry procedure, giving your User ID and password when required. It then goes into your private mail area and grabs any messages left for you, as well as sending any you have written. After that it joins any conferences to which you're joined and posts any replies you wish to make. Then it reads every unread message in every conference of

TIME FOR A BROWSE

One of Nicola's handy features is the Conference Browser, which shows you an entire list of the conference available. The list is subdivided into related subjects which you can scroll through using the mouse. When you reach a subject that interests you, click on it, and all Conferences related to that subject will be shown in the browser's lower window. Click on a conference name and you can join it the next time you are on-line.



One of the program's clever features is the way it automatically builds up an address book of those people who send you mail. You can also add their home addresses and telephone numbers.



Nicola gives you a choice of ways to read the messages. Here you see the Overview window which is extremely comprehensive in the mouse-controlled options available.

```
Show All
                         TITLES
Cix: special "script commands"
Cix: The Usenet, gateway to the rest of the world
Cix: users, conference information
Cix: Utilities to help you
Computing:  8 bits
Computing: Acorn computers
Computing: Commodore and Amiga
Computing: Apple
                      DESCRIPTIONS
a4000          (  c) Secret
amiga          (j o) Commodore Amiga Conference.
amiga.24bitgra (  o) Extended graphics for the Amiga
amiga.com      (  c) Amiga Commercial Developers forum.
amigaware      (  o) Devoted to Britains first Amiga only PD magazine
amreport       (  o) AMReport International - Amiga OnLine magazine
cando          (  o) For the CanDo authoring system on the Amiga.
checkmate      (  o) A1500 information exchange
gtb            (  c) Discussion of GadToolBox and Amiga Gadget Creation
soundtracker   (  o) Amiga soundtracker and clones
ttx            (  c) For users of Turbotext on the Amiga
```

Nicola's Conference Browser is a unique option that lets you peruse the 1,000+ conferences available.

which you're a member. These messages will then be downloaded. If you've requested any files or binmail to be downloaded, it will be done automatically.

Having downloaded your binmail and new messages, *Nicola* will prepare your message base with what's known as a parse. It checks all the messages it has downloaded then arranges them in your preferred reading order.

For example, you can use what's known as a 'boring people filter' to automatically remove messages from people you don't like.

Finally, you can also decide the conference order in which your messages are displayed as well as the read-type. Most people prefer to use the Reference option which lets you read messages in threads rather than the order in which they were posted, but the choice is yours.

Once *Nicola* has parsed your messages, they are added to a database which is pruned to keep it to a user-definable size.

So, for example, you could specify that it stores any messages in the Amiga conference for 31 days, whilst those in the auction (which is more active) should only be kept for seven.

The real beauty of the program is the options it offers that CIX doesn't. For example, you can choose to attach a toolbar to several of the windows, including the conference window. This means you can perform all activities from reading messages to downloading files using the mouse.

It took me months before I got around to getting hold of *Nicola*, but now that I have it's as important to me as wings are to a bird! It means that I can finally read and comment on all of the new messages in my conferences without the pressure of being on-line.

The down side to that is that I now spend hours each day reading and responding to postings on every subject under the sun.

The program does have some stupid little bugs but, because you pay for a lifetime licence, you can simply download new versions when they become available.

It's going to make a major impact on my phone bills and CIX charges because my on-line time has dropped from 30 minutes a day to less than five. Its unique options mean I get the most out of my membership to CIX, and I feel that the service has become far more productive now than it ever was.

A really nice, well considered product which is a joy to use. CU

SEARCH AND RESCUE

If you're joined to even a moderate number of conferences, you can very easily waste hours each day reading useless information. If you prefer to stick purely to subjects which interest you, you might like to use *Nicola*'s powerful search options. Using either specific search criteria (find any message containing the words 'Amiga games') or wildcards (find any message containing the letters 'Ami' or 'Ga', you can search the current topic, conference or even your entire database.

GET ADDRESSED

Whenever you receive mail from anyone, the program takes their electronic address as well as their CIX ID and adds it to your address book automatically.

If you want to, you can manually add to this information, their fax number and full postal address.

This makes it an ideal way of maintaining an up-to-date list of people to whom you've spoken privately.

OFF-LINE READER

RICHARD HARRISON, 78 TAMWORTH ROAD, HOVE, EAST SUSSEX, UN 5FH. TEL 0273 885547

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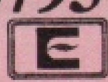
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- ()**B973. CYBERNETIX** fast Defender clone, enhanced Amiga version
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- ()**C267. GIGAR TETRIS** pollished version of tetris for 1meg chip + amigas
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Jason Holborn checks out Power's new Primera colour printer.

Primera

Choosing a printer that's right for you can be a minefield for the uninitiated – do you buy a dot matrix, an inkjet or a laser printer? Each has its own unique strengths and weaknesses. Dot matrix printers are cheap but low in quality. Lasers give great results but are expensive to buy, expensive to run and (unless you've got a few thousand pounds to spare) mono only. Inkjets are perhaps the best compromise, although even top-of-the-range inkjets often leave a lot to be desired when printing pictures.

Choosing a colour printer is even more complicated. Colour dot matrix printers often bleed colour, and colour inkjet printouts can look rather washed out.

Power Computing have stepped into the foray with the release of the Primera, a thermal printer manufactured by a little known US-based company called Fargo. Most of us associate thermal printers with the horrible little Sinclair printer that Spectrum users used to be so proud of, but the Primera is a totally different bucket of bolts altogether. Thermal transfer printing has moved on a long way since the black (chunky) text on silver toilet paper that Sinclair's offering used to employ.

The Primera is based around the latest thermal transfer technology that uses a wax-based ink ribbon (actually, it's more like a roll of cling-film) which can print on to plain paper or film. Heat from the print head transfers the ink on the ribbon in pixel patterns directly on to the paper. The result is a full-colour print out that is considerably brighter and bolder than the sort of colour print outs you'd expect from either an inkjet or a dot matrix.

Although the Primera has been designed for PC-compatibles (Fargo even include a Windows driver with the printer), Power convinced them that an Amiga driver would be a damned good idea and Fargo came up with the goods in the form of a standard preferences printer driver that will allow the Primera to be driven by just about any program including *DPaint* and *Professional Page*. This is included at no extra cost, so you can start printing almost immediately.

The quality of print outs even from the basic Primera is a sight to behold. Gone are the bleeding colours and horizontal banding associated with more conventional colour printers. Primera's printouts are bold and full of vibrant colour. Available for an extra £215 is an upgrade which gives the Primera true colour printing or – as Fargo would call it – photo realistic printing. Although the review model we were sent lacked this add-on, Power were kind enough to provide me with a number of samples and the quality has to be seen to be believed.

With virtually no sign of dithering, the Photo-realistic Primera is capable of producing colour prints that are on par with those you see in magazines like CU AMIGA. Indeed, you'd probably be hard pushed to tell the difference between a Primera printout and a professionally colour separated image produced by an expensive Web-offset press (the type of printing press used to print CU AMIGA!).



Primera may seem rather expensive, but the quality of colour print outs is second to none.



In many ways, the Primera has an awful lot in common with a professional printing press. Just like the printers used to print CU AMIGA, it works by colour separating the image and then printing the page in three passes – one for yellow, one for magenta and one for cyan. Each time a separation is printed, the printer drags the page back to the start and then prints the next separation over the top, automatically mixing colours in the process. It's pretty impressive to watch and quite noisy too.

Also available is a four colour ribbon that can print a black separation, giving bolder shades of grey. Primera can handle mono prints too, via a separate monochrome ribbon.

The only real problem with the Primera is its running costs. The 'starter' ribbon bundled with the printer will only handle 30 colour pages and once that's used up you have to buy another, which will set you back a further £38.95. Even this ribbon will only handle 115 prints (or just 80 if you buy the four colour ribbon). And even then you have to use special paper which costs £18 for 200 sheets. If you use the Primera for photo-realistic printing (via the £215 upgrade), the cost of ribbons shoots up even further – £79.95 for a ribbon capable of just 25 prints or £250 for 100 prints. If you calculate the cost of each sheet taking into consideration the price of both the ribbon and the paper, you're looking at 42p per print out. Photo-realistic printouts work out at an amazing £3.30 each!

CONCLUSION

Technology this advanced doesn't come cheap and the Primera certainly isn't a cheap printer to either purchase or run. As a result, it's not the sort of printer that will suit the average *DPaint* fanatic. Sure, we'd all love to own a printer capable of such brilliant results, but the high running costs would probably cripple even the most affluent. If, on the other hand, you use your Amiga professionally for anything from DTP (*ProPage* printouts are particularly impressive!) to business presentations, Primera is the best colour printer available for under £1,000! CU

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EASE OF USE 84%
Installing the printer driver is possibly the most complex operation you'll have to face!

VALUE FOR MONEY 65%
The Primera isn't cheap to buy and even running it will break the bank!

DOCUMENTATION 82%
The process of setting up the printer is very well explained although it lacks any Amiga-specific information.

PRINT QUALITY 92%
No other colour printer in this class even comes close!

"If you can handle the running costs, Primera is the best colour printer available."

OVERALL 91%

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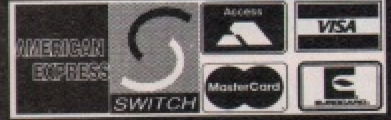
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Unlike its rivals, the 1208 leaves your Amiga free to access the PCMCIA slot.

POWER A1208

One thing I noticed when reviewing this little RAM accelerator for the A1200 was how difficult it was to fit. In the days of the A500, trapdoor expansions could slide in easier than a Ferrero Rocher into my mouth. The A1200, on the other hand, requires half an hour of swearing, creaking and ripping the skin off your fingers. In the end, though, I got it in, and I have to say I'm quite glad I did. To explain why, I'll need to tell you about the capabilities of the thing.

Power have already released the A1204, so what's so different about this one? Well, for a start it takes SIMMs, which means you can buy the extra memory anywhere. And, unlike most trapdoor expansions, it can take 8Mb SIMMs without locking up the PCMCIA card slot! It also contains a battery-backed clock, a space for an FPU (it can take any kind, is not restricted to a particular speed, and it won't conflict with any software). Even so, you can still switch it off via a jumper – but then you can also switch off the memory with a single flick.

With so many different configurations, you'd expect the prices to fluctuate a little. But with the bare board costing as little as £69.95, the 1208+33MHz Co-Pro and 2Mb of RAM costing £199.99, and the high-end 1208+50MHz Co-Pro and 8Mb RAM costing only £530.95, the unit represents great value for money.

So what does this mean for the end user? If you want to expand the capabilities of your machine, and want to keep on building, then check out something like the forthcoming GVP A1230 II. But if you just want to improve your machine's performance, then this is probably the most system-friendly way of doing it. CU

Available from: Power Computing, Unit 8 Railton Road, Woburn Road Industrial Estate, Kempston, Beds, MK42 7PN.
Tel: 0234 843388
Price: £69.95 to £530.95

89%

CELLPRO

Scientists have been playing God for years, and now you too can take control of your own little digital Universe thanks to MegaGem. The advent of computer graphics brought about a revolution as scientists learnt that they could not only use the computer for large scale calculations, they could even see the results in an easy-to-comprehend form.

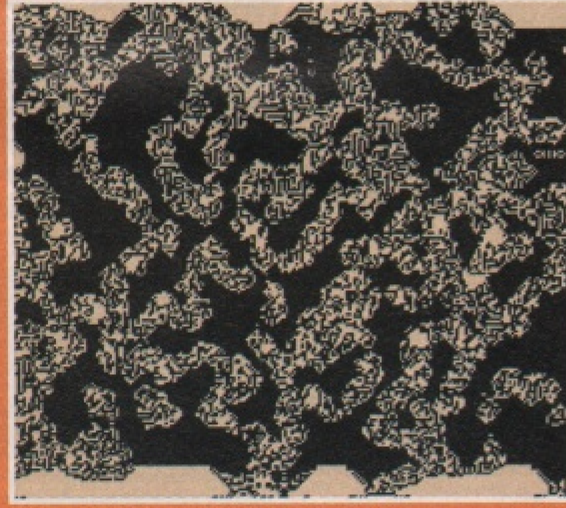
Of course the first examples of this were boring old graphs and charts. But it wasn't long before a less up-tight computer user designed a program called *Life*. *Life* was partly an entertaining distraction and partly a serious attempt to model the life cycle of simple organisms living under very strictly controlled conditions.

Each organism is represented by a square pixel which can have up to eight neighbours. The exact number of neighbours determines what the organism will do.

For example, too many neighbours and the organism will die from over-crowding, too few and it dies of loneliness. By the same token, new organisms can spontaneously spring to life if a dormant pixel is surrounded by two neighbours (mummy and daddy).

The entire *Life* simulation revolves around two simple rules, yet it's absolutely fascinating to see how various starting conditions (the arrangement of dormant and live organisms) can produce vastly different and intriguing results.

Life spawned an entire classification of computer programs known as cellular automata, whose sole purpose is to model miniature biospheres. *CellPro* provides you with an Amiga version of *Life*, but it also offers five other cellular automata. Whilst all six programs are relatively simple, consisting purely of rules involving neighbours and the status of the cell whose future is being decided, the diversity of effects that is possible is absolutely amazing.



Here's another of the weird designer automata called Lichen. Cells grow slowly across the screen like fungus.



The age old *Life* simulation is now available in 32-bits.

Before you automate a colony, you'll need to set the starting conditions. This is done by loading an IFF screen from disk. Having done so, you select the type of living conditions you want to apply, and away you go. The screen will be filled with a seething or bubbling or drooping or a technicoloured mass of organisms all fighting for survival in their own unique way.

It seems that most types of automations eventually result in a stable colony, where either the same patterns of life and death are endlessly duplicated in short recognisable patterns, or where nothing appears to move at all. Some colonies are even a combination of both.

When you tire of the supplied IFF screens and types of automata, you can design your own, based on either a four or eight pixel grid. The smaller grid reduces the number of organisms that influence each other.

CONCLUSION

As an experimental and educational tool, *CellPro* is very useful. However, I wouldn't like you to think that just because it has educational value it must be boring – far from it. *CellPro* is a fascinating and thoroughly absorbing taste of the science of cellular automata. It's rather expensive, and that reflects the work which has gone into the program and the more serious uses to which it can be put. I would have liked to have seen a drawing and magnify function built into the program. But apart from that I liked it. CU

Available from: MegaGem, 1903 Adria Santa Maria, California 93454, USA.
Tel: 0101 805 349 1104.
Price $89.95

83%

SEAGATE 80MB IDE HARD DRIVE

Everyone wants a hard drive. Whatever your bag, whether it's music, video, DTP, programming or trout farm management, a hard drive will make your existence a lot more bearable. Just think... no more searching through piles of disks to locate that rare Peruvian monkfish. Never again will your only disk containing your potential number one hit fall down the all-engulfing black hole behind the desk. And you can kiss goodbye to the dreaded 'cat peed on my favourite disk' syndrome. The trouble is, now that everyone wants one, everyone's selling them in all shapes and sizes (well, not quite all shapes. I've yet to see one in the shape of an individual Mr Kipling apple pie – but give it time).

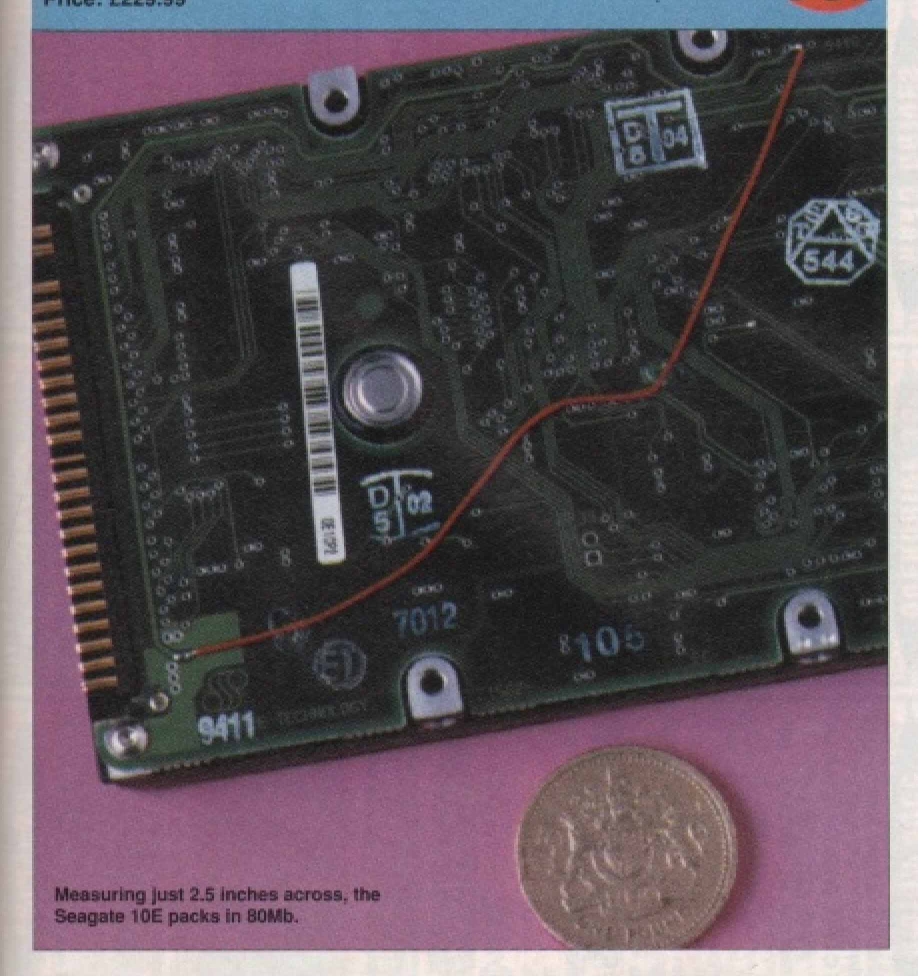
This particular example comes in the shape of a 2.5" IDE hard drive. It fits into the internal IDE interface of any A600 or A1200. This means that you'll have to take the cover off your computer to get the drive in, which will invalidate your warranty. If your Amiga still has a good stretch left on its warranty, it may be a better idea to get a drive fitted by one of Commodore's officially recommended hard drive installers, such as ZCL. Otherwise, there's no reason why you shouldn't go ahead and do it yourself.

Connecting the Seagate is just a matter of opening up the Amiga's outer casing and plugging the drive into the bus on the circuit board. A short ribbon is included to make the connection. Installing is just about as simple as can be. A very straightforward installation program comes with the drive, with plain instructions on how to prepare and partition it. A simple slider is used to select the balance of disk space that you want to allocate to your boot partition and the main workspace. It's then up to you to copy over the relevant version of Workbench. Speed-wise, it clocks around 400K per second according to SysInfo, which is just about par for the course for a 2.5" IDE drive.

If you're not bothered about invalidating your warranty, and speed isn't a major concern, this could be a very good buy. It's not nearly as fast as some other drives (Software Demon's Overdrive wipes the floor with it on that count), but it's cheap, and it works! Now if you'll excuse me, I've got a Japanese trout to locate... CU

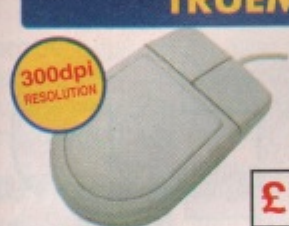
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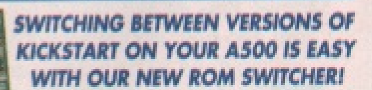
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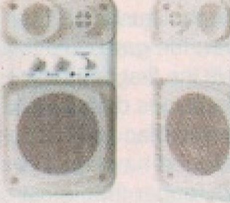
You can improve software compatibility on your A500 Plus! By fitting our ROM switcher, you can alternate between the Kickstart 2 already resident and another version of Kickstart ROM chip, giving you the freedom of choice. Fitting is very simple indeed, and requires *no soldering* or special technical knowledge. Fitting allows two methods of switching; either by keyboard reset, or by an external toggle switch. **N.B. Kickstart ROM not supplied. A500 Revision 5 boards will require circuit modification.**

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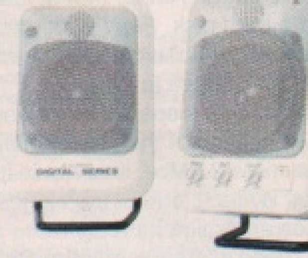
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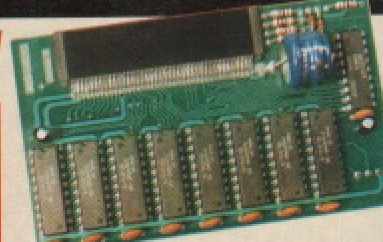
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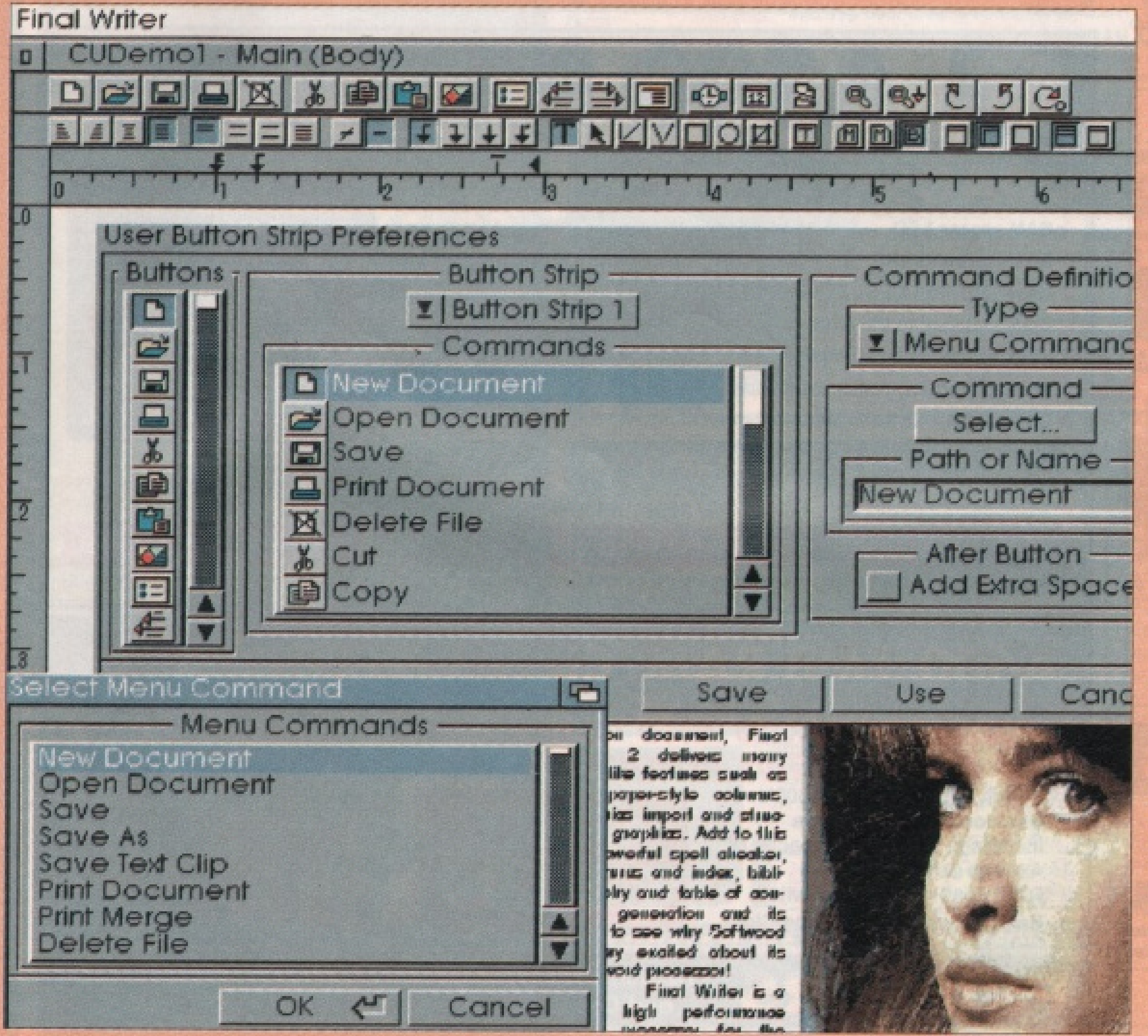
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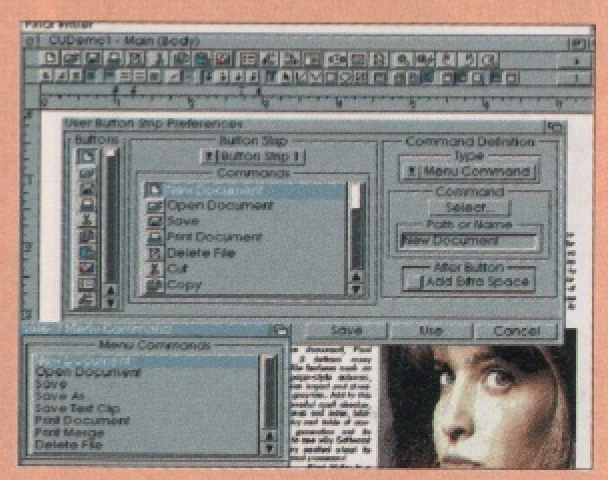
FINAL WRITER



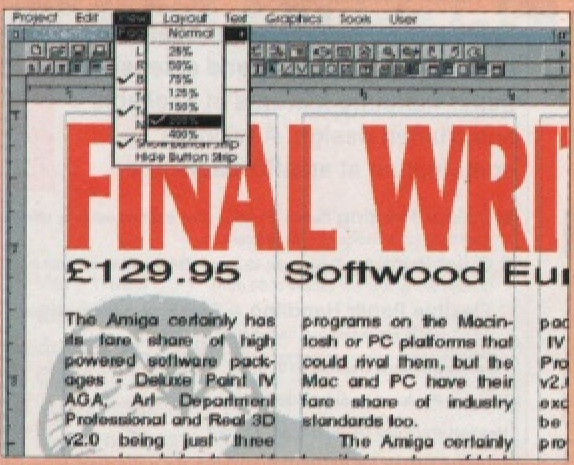
Badged as the ultimate Amiga word processor, Softwood's new *Final Writer* promises much. But can it deliver? We put Jason Holborn on the case to find out.



One of the most powerful features of *Final Writer* is its configurable front end that allows you to tailor the program to your own needs.



Drop shadows and complex logos are very simple to produce. The CU AMIGA logo was created using *Final Writer*'s powerful text box facility.



Just like a DTP program, *Final Writer* allows you to zoom in on your page, so you can quickly check any particular section of of your layout.

The Amiga certainly has its fare share of high powered software packages – *Deluxe Paint IV AGA, Art Department Professional* and *Real3D v2.0* are just three examples. Indeed, you'd be hard pushed to find programs to rival them on the Mac or PC. But the Mac and PC have their share of industry standards too.

Where these two machines really excel is with serious applications like databases, spreadsheets and word processors. Sure, *Protext* on the Amiga is a very powerful package. But put it next to *Word for Windows* on the PC and you'll soon realise why many people wanting a platform for such programs tend to choose Macs or PCs rather than Amigas.

With the launch of *Final Writer* from Softwood, however, the gap could finally be closing. *Final Writer* is the first of a new generation of high-powered packages designed to take on and win against high-profile Mac and PC-based word processors.

Softwood have been writing Amiga word processors longer than most of us care to mention, and *Final Writer* demonstrates beautifully the experience they've gained. Building upon the success of Softwood's earlier products, *Pen Pal* and *Final Copy*, even its name suggests *Final Writer* is the ultimate Amiga word processors.

The competition may not be so stiff in the Amiga marketplace with programs like *Wordworth 2* and *Excellence!* providing the only challenge, but can Softwood honestly hope to compete against the Mac and PC heavyweights?

BIG IS BEAUTIFUL

If there's one thing that *Final Writer* does have in common with its Mac and PC cousins, it has to be its over-the-top system requirements. Unless you've got an Amiga with at least 1.5Mb of RAM and a hard disk, *Final Writer* won't even run. And, even then, you're going to need at least 9.5Mb of hard disk space to install it!

If hard disk space is tight you can install a cut-down version of the *Final Writer* package that takes up a mere 2.5Mb! But even in its cut-down form *Final Writer* is one of the biggest applications to grace an Amiga hard disk.

These system requirements may seem rather steep, but *Final Writer* is a lot more than just a text processor like Arnor's *Protext*. It is another of the new breed of 'word publishers' that have proved so popular with Amiga users. Softwood themselves coined the phrase when *Pen Pal* was originally released back in 1989, and it has since been accepted as jargon for a word processor that also features DTP-like page controls.

Whereas a normal word processor will allow you to process text, the format of that text is still very strict – a single full-width column of text, printed using the fonts built into your printer. A

word publisher, on the other hand, allows you to produce documents complete with pictures and multiple font styles without assuming that you own an expensive laser printer.

BUTTON MOON

Even *Final Writer*'s front end is a cut above the rest. If you already own *Final Copy 2*, then you should feel instantly at home, as *Final Writer*'s front end is very similar. The only major difference is the two rows of buttons along the top of the screen. *Final Copy 2* had its own buttons, but Softwood have really gone to town with the buttons on *Final Writer*.

Each of these buttons performs a particular task. All the usual buttons to justify text and so on are there. But quite a few of the functions normally found in the *Final Writer* pull-down menus have been moved down to the button bar as well. Simply by clicking on the appropriate button, you can perform common word processing tasks such as cutting, copying and pasting blocks of text without ever having to search through the program's pull-down menus.

Nothing special so far, but *Final Writer*'s buttons are far from ordinary. As Softwood have gone to great lengths to explain, the great thing about these buttons is that they are fully configurable. Each one can be changed to suit your own word processing needs, and there are an additional seven strips of buttons which you can flick through with a single mouse click.

Defining a button is simple. All you do is select the button strip you want to edit, select a button image that suits your needs (don't worry, there are plenty to choose from!), and then drop it down into the position that you'd like it to appear. The buttons are nothing more than generic images, so it's up to you to assign a task to them.

Final Writer allows you to assign one of four different types of operation to a button – an *Arexx* script, a text clip, a *Final Writer* menu operation or a string command. Being able to assign an *Arexx* script to a button is perhaps the most powerful of all these operations. It gives you the ability to program *Final Writer* so that complex operations that would normally require many steps can be carried out with a single mouse click.

Final Writer's *Arexx* implementation certainly isn't weak either. Virtually every operation you could possibly want to carry out can be performed automatically via *Arexx*. Using the string command operation gives you access to *Final Writer*'s *Arexx* commands too, although only one command can be assigned to each button.

WORD POWER

Once you've configured *Final Writer* to suit your needs, it's time to get stuck into some serious document processing. At its simplest level, *Final Writer* can be used as nothing more than a straight text processor. Just like *Protext*, you can mark sections of text, cut, copy and then paste the block down anywhere in your document. Add to this its powerful search and replace functions and you've got the makings of a decent text processor.

Softwood certainly don't seem to believe in being average. *Final Writer*'s predecessor, *Final Copy 2*, was criticised for lacking advanced word processing functions like the automatic generation of tables of contents, bibliographies, end-notes, indexing and so on. Softwood have answered these criticisms by building all of these functions into *Final Writer*.

Final Writer also sports a very impressive spell checker and thesaurus, both of which use the same Proximity/Collins Linguabase dictionaries used by *Protext*. Many word processors of American origin fall down on this all-important addition. So it's very nice to see that Softwood have seen fit to cater for the needs of UK Amiga users. The spell checker, which includes medical and legal entries, offers over 110,000 entries. And the thesaurus isn't bad either, with over 826,000 synonyms.

Final Writer's spell checker and thesaurus should keep even the most prolific of word benders happy. Even without the added benefits that a word publishing program delivers, *Final Writer* could easily stand against the competition on the strength of these word processing functions alone.

PICTURE THIS!

Processing raw text is an important feature of any word processors. But what really makes *Final Writer* different from traditional word processors is its word publishing features. The word publisher is certainly noting new, but *Final Writer* blurs the fine line between word processing and desktop publishing still further, giving you even more DTP-like features. No longer are you restricted to a single column of text on your pages. *Final Writer* will happily divide the page into six newspaper-like columns with automatic text flow control.

Pictures can be pulled into your documents too. *Final Writer* supports both IFF and encapsulated PostScript (EPS) structured images which can be displayed either as a blank picture box, as a monochrome preview, or in full colour. If you own an AGA-based Amiga, *Final Writer* fully supports the new screen modes provided by the AGA chip set, so pictures can be displayed on screen in up to 256 colours. Running *Final Writer* in 256 colours does slow it somewhat, particularly when your documents become more complex. »



Final Writer's picture handling is very impressive indeed. If you're lucky enough to own an AGA Amiga, *Final Writer* will even display your pictures with up to 256 colours.

TIP TOP TYPE

Fonts are particularly well handled in *Final Writer*. Apart from its very close cousin *Final Copy 2*, *Final Writer* is still the only Amiga word processor that fully supports PostScript Adobe Type 1 fonts. Type1 font support may seem a rather strange move when you consider the popularity of the AGFA/Compugraphic standard on the Amiga. But it's certainly a good thing with hundreds of Type 1 fonts available through the Amiga public domain libraries for little more than the price of a disk.

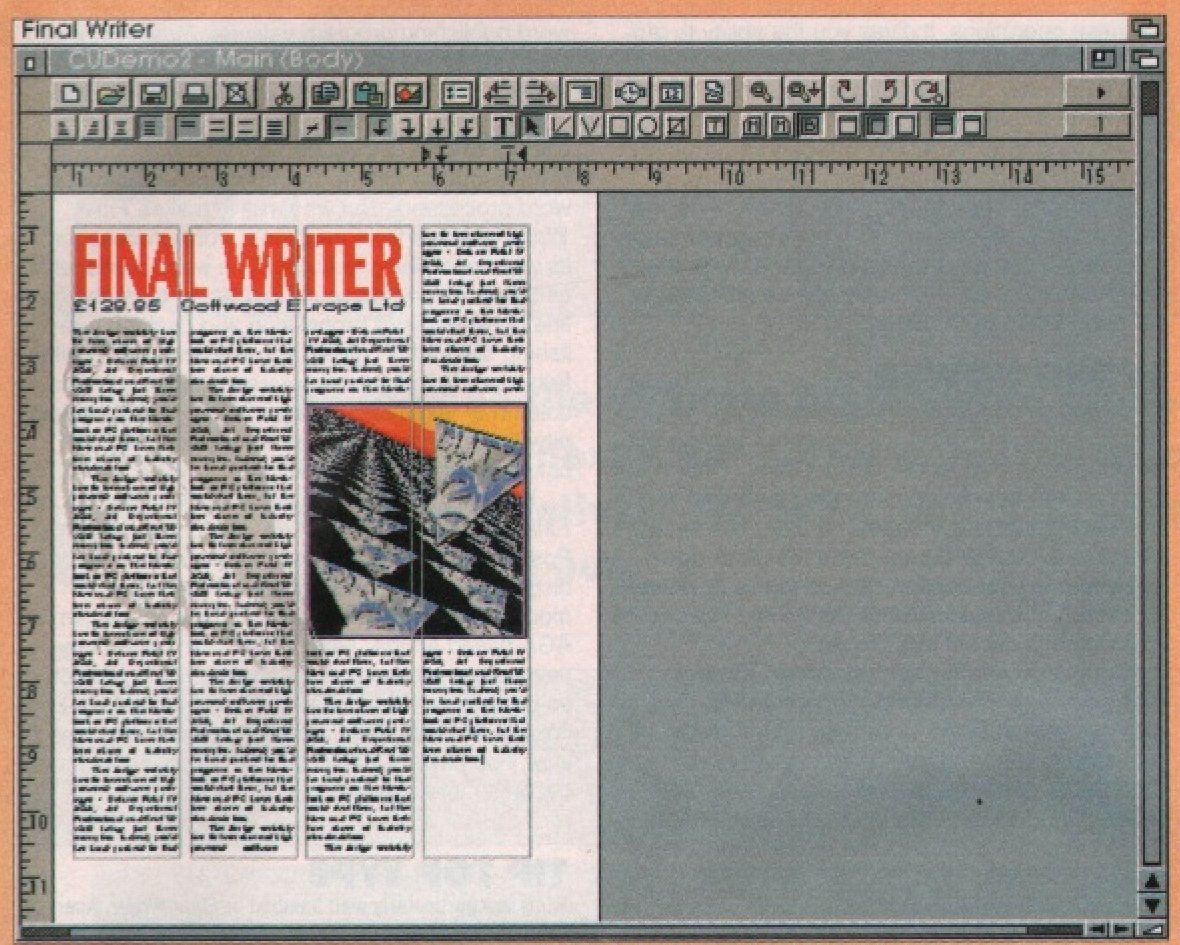
Compugraphic fonts are still rather hard to obtain, and you'll have to pay through the nose for them. So it comes as no surprise that Softwood have turned their backs on the 'official' Amiga outline font standard.

They certainly haven't skimped on the number of fonts they bundle with the program either. Counting through the bulging directory the *Final Writer* installation program created on my A1200's hard disk, *Final Writer* comes with no less than 110 free fonts in a number of different typefaces. These range from the usual Helvetica, Times and Avante Garde fonts to more unusual examples such as Japanette (an oriental-looking font) and Yorkshire, a very stylish freehand font.

***Final Writer* gives you extensive control over the text in your document. As well as the usual point size (*Final Writer* supports point sizes up to 360 point!), style, colour and font controls, you can also adjust the leading amount (the gap between lines) and horizontal width (for stretching text). And you can even slant (shear) text, giving you much better control when italicising a font. And, because *Final Writer* uses nothing but outline fonts, your text remains jaggie free, no matter how adventurous you get!**



Final Writer fully supports Adobe Type 1 outline fonts which can be printed to any preference-supported printer. Just to get you started, Softwood kindly included 110 free Type 1 fonts!



Final Writer also provides a page preview feature which produces a scaled representation of your page.

» EPS support is particularly well implemented. Even if the EPS file does not have a bitmap header, *Final Writer* will still allow you to view it on screen in full colour.

Even *Professional Page* didn't have this feature until recently, so it's nice to see that Softwood are keeping up with the Joneses!

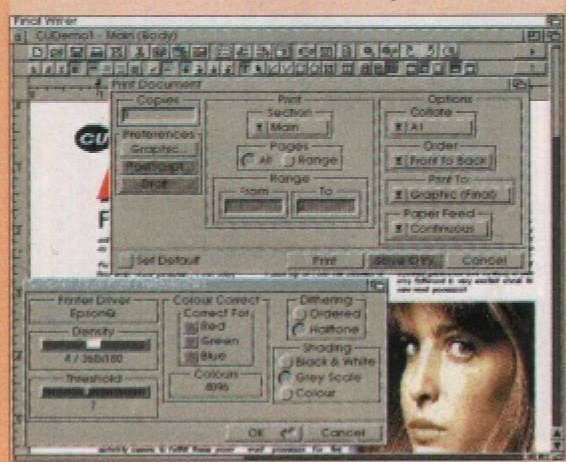
Just like its predecessors, *Final Writer* gives you extensive control over your pictures. You can scale them to your heart's content, and it's possible to contour text around a bitmapped image simply by setting the background colour to transparent mode.

Also, just like a DTP program, you're given full control over the 'text stand off' setting (how close the text flows around the image).

PRINTS CHARMING

Your page may look nice on screen, but it's of no use whatsoever unless you can transfer that quality to paper. Thankfully, *Final Writer* doesn't fail here either. Not only can you print to any standard preference-supported printer with the sort of quality results you'd normally expect from *ProPage*, but *Final Writer* also provides direct support for PostScript printing. Softwood have certainly gone to town on *Final Writer*'s PostScript implementation with full support for thumbnails, page scaling and crop (registration) marks.

Final Writer provides two forms of preference printing – final and draft. If you print in final mode, the entire document is printed in exactly the same way as a DTP program with all the fonts and graphics built up as a massive bitmap which is sent to the printer as a screen dump. In draft mode, however, only the graphics are generated by *Final Writer*. The text within your document is printed using your printer's own internal fonts. This gives a much faster printing time, but the results can look a little weird to say the least.



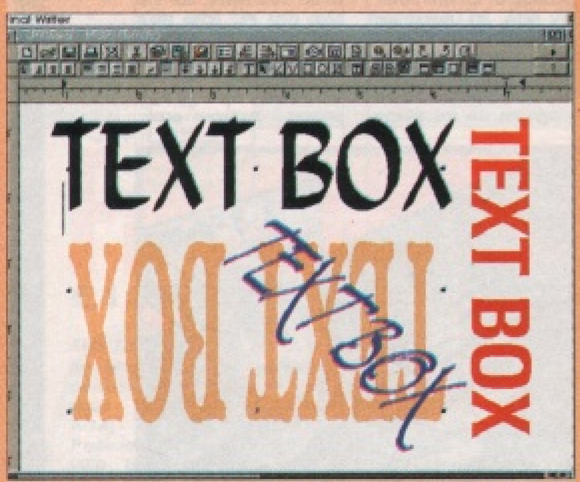
Final Writer is one of the first Amiga word processors to support PostScript printing as standard.

BOX CLEVER

One of the nicest features unique to *Final Writer* is the 'textbox'. These text boxes are very similar to the text boxes in Soft-Logic's *PageStream* DTP program. Although each text box that you create is limited to a single, short line of text, the text you put in a text box is kept completely separate from your document's main copy.

What's more, the text inside the box can be stretched and shrunk horizontally and vertically simply by dragging the 'handles' on the four points of the box.

These text boxes come in particularly handy when you want to create a massive logo using outline text. Instead of having to work out the exact horizontal scale and point size of your heading, you can simply drag the heading's text box to the shape you want and *Final Writer* will automatically adjust its size. Clever eh and saves you a lot of time and energy fiddling about!



Final Writer's text boxes are very similar to the scalable boxes in *PageStream*. The text within a text box can be stretched, shrunk and rotated with ease.

CONCLUSION

Final Copy 2, *Final Writer*'s predecessor, was heralded as 'about as close to being a desktop publisher as a word processor dare go' when we reviewed it back in the April issue of CU AMIGA. It seems that Softwood have managed to push back the boundaries still further without losing sight of the program's word processing origins. They have made *Final Writer* a more capable word publisher and one hell of a word processor too! Indeed, if you were to judge *Final Writer* on its word processing capabilities alone, it would still earn its top rating with flying colours!

Final Writer certainly isn't the answer to everyone's word processing and word publishing needs. If you're a professional writer who can live without the fancy page layout controls the program has to offer then a dedicated word processing program like *Protext* is still possibly a better bet.

Even if you do want a word publisher, *Final Writer*'s system requirements may force many to go for a less capable program.

If you do have a machine that can handle *Final Writer*'s requirements, an accelerated Amiga is a must – even on my A4000/030, *Final Writer* started to drag its heels when working with complex pages containing lots of pictures. Try it on an A500 or A600 and you'll be waiting all day for the screen to update!

This would certainly be a great shame because you'll be missing out on what is undoubtedly the Amiga's most powerful word publishing program. *Wordworth 2 AGA* comes close, but *Final Writer* is better on nearly every front, raw text processing, graphics handling, printing, font control etc.

Indeed, there are considerably few aspects of *Final Writer* that are anything less than exceptional. On an accelerated machine, *Final Writer* is the top Amiga word processor to rival even the Mac and PC heavyweights! CU



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EASE OF USE 81%
You'll need to study the manual for some of Final Writer's more complex functions, but the rest is blindingly obvious.

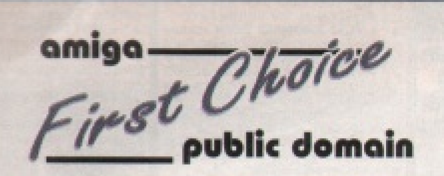
VALUE FOR MONEY 85%
Selling for the same price as Digita's Wordworth 2 AGA, Final Writer is an absolute bargain.

DOCUMENTATION 90%
Totally top notch – other software companies could learn a thing or two from Softwood!

FLEXIBILITY 94%
Those user-definable buttons are a great idea. Now you can set up a program to work how you want it to.

" The most powerful word processor ever to grace the Amiga. "

OVERALL 90%



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G028 - PIPELINE - Classic game but too fast on A1200/A4000 due to superior processor.
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G057 - SPACE INVADERS 2 - A revised version of the classic game.
G059 - AMOS CRICKET - A good cricket simulater written in Amos.
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G061 - ESCAPE - The aim of this excellent game is to run over tiles pushing specific ones down to open gates which allow you to reach the exit. Do it within a time limit to progress.
G062 - DR. MARIO - Similar to a NES game of similar name but better graphics.
G063 - ASSAULT - This average game involves you shooting all the characters that pop up in the windows.
G064 - DEATH BINGERS IN SPACE - A Xenon style shoot em up.
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G066 - STARIANS - Bizarre platform game.
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G069 - BILLY BURGLAR - Dodge lights to escape from prison.
G070 - AMIGABOY - The n game Tetris is widely regarded at its best on the Gameboy. It has now been perfectly converted, with exact visual representation.
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G073 - PARACHUTE JOUST - Guide the skydiver to the ground.
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G075 - JEWL - A brilliant game.
G076 - TOP SECRET - Sorry, can't tell you!!!
G077 - JELLY QUEST - This game by David McGuire was described by Amiga Power quote "It's a superior brand of PD puzzle game, and its looks can only be described as - dead lush!" It went on to receive a 4 out of 5 star rating.
G078 - VENUS INVADERS - Excellent new version of space invaders.
G079 - THE RIGHT WAY - A great lemmings clone.
G080 - SUPER PRIX - A birds-eye-view racing game.
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U195 - RACE V1.6 - A disk that will work out the chance of a horse winning a race.
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UTILITIES

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E004 - WORLD WAR 2 - Good history aid.
E006 - WORLD GEOGRAPHY - Very useful utility.
E007 - KIDS DISK 1 - Excellent reading utility.
E008 - LEARN AND PLAY 1 - For younger amiga users, very popular.
E009 - LEARN AND PLAY 2 - See above, usually ordered as a 2 disk set.
E010 - GCSE MATHS - Good, written by a teacher of the subject.
E011 - LANGUAGE TUTOR - French, Spanish, German and Italian.
E012 - AMIGAWORLD - This piece of educational software contains details on every country.

DEMOS

D004 - ARSEWIPE - Hilarious toilet role commercial.
D007 - FILLET THE FISH - Cartoon animation.
D019 - SIMPSONS SLIDESHOW - Pictures of televisions wacky family.
D023 - PUGGS IN SPACE - Another cartoon animation from the same person who brought you Fillet the Fish.
D025 - SAM FOX - Slideshow.
D035 - RUDE NOISES - Hilarious samples.
D036 - FAST CARS - Pictures of the worlds most exotic cars.
D074 - MADONNA LIKE A VIRGIN - Music put to naked slideshow of Madonna
D091 - SAFE SEX DEMO - Hilarious mixed samples.
D114 - NEIGHBOURS SLIDESHOW - Very old but still amusing pictures of the cast with drawn on special effects.
D121 - GIRLS ON FILM - Digitised animation.
D129 - SHOWERING GIRLS - Colour digitised slideshow.
D138 - WAR SIMULATER - Samples, that could get you a day off school or work. Sounds of sickness and war. Try it down the phone!!!
D198 - BASIC INSTINCT - Digitised pictures from the film.
D199 - STRIP SLOT MACHINE

VIDEO ART

U026 - TV GRAFFIX - Loads of backdrops etc. for use with genlock. Also fonts for Dpaint. (2 disks)
U169 - HARLEQUIN VIDEO ART 1 - Excellent collection of backdrops of superb quality for use with genlock.
U171 - HARLEQUIN FONTS 1 - Loads of excellent Hi-Res fonts.
U172 - HARLEQUIN FONTS 2 - More of the above.

VIRUS KILLER

V001 - SUPERKILLERS - Highly recommended as it could save you ££'s. Essential for hard disk owners. With no virus protection you are putting your entire software collection at risk. Regular updates to keep in touch with all virus activity. Separate versions for AGA machines.
All our disks are virus free.

MUSIC

MD01 - MUSIC MODULES - A massive 10 disk collection of good quality music modules. All of soundtracker file type for use with RSI Demo maker, Noiseplayer and many other applications.

AGA SECTION

A019 TO A023 - WEIRD SCIENCE - Excellent quality pictures. (5 disks - available separately)
A024 - FIT CHICKS - A collection of girly pictures for the A1200 only. (2 disks)
A025 - FREAKS BODY SHOP - A small selection of girly pictures.
A030 - FERRARI PICTURES - Pictures of a new model from the worlds most exotic car maker. Good 256 colour pictures.
A036 - NIGHTBREAD - Many pictures drawn in 256 colours. (2 disks)
G042 - AGA TETRIS - Controlled with the cursor keys, this excellent conversion of probably the most addictive game ever is now available with 256 colour graphics.
G082 - AGA CHESS - An excellent game but you will need 4mb of ram to get it to work!!!
U001 - ULTIMATE BACKUP DISK - This compilation includes DCopy V3.0 which is probably the only copier that works successfully on the A1200/A4000.
U123 - WORKBENCH HACKS - Many useless special effects for workbench V3.0
U118 - MORE WORKBENCH HACKS - Guess what?
U255 - WB V3.0 INSTALL - If you need to install your hard disk then you need this.
U256 - A1200 DEGRADERS - An essential purchase for AGA owners. Includes Fake Fast Mem, The Degrader, Diskstart, Kill AGA V2 and Helpful hints.
U257 - VIEWTEK V1.03 - An essential purchase allowing you to display AGA graphics.
U258 - HDMEM - This utility allows your AGA machine to use your hard disk as virtual memory. If you've got a 80mb hard disk then you can have 80mb ram. Requires FMU, MMU etc.
U272 - WORKBENCH V3.0 SCREENS - Improve the appearence of workbench with these excellent backdrops.
D181 - TEAM HOI PLANNER GROOVE - This was the worlds first ever AGA megademo.
D195 - PANTARHEI - A new AGA megademo. With amazing sound, graphics and colours.
D197 - TEAM HOI 2 - Sequel to the first ever megademo.

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FD07	FD08	FD09	FD10	FD11	FD12
FD13	FD14	FD15	FD16	FD17	FD18
FD19	FD20	FD21	FD22	FD23	FD24
		FD25	FD26		

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BauhausBold Anqm
BILLBOARD Chicargo Arctic2
AvantGarde Cartoon
Architect CaslonOpenface

A SMALL SELECTION OF FONTS FROM SETS 1 TO 4

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The Ultimate Amiga Buyer's Guide '94 is jam-packed with expert opinion on which Amiga packages are worth buying – and which ones are best left on the shelves! We've reviewed and rated all the top Amiga products so you'll know which packages offer outstanding value for money and which ones don't. It's the buyer's guide to end all buyer's guides from the team you know you can trust to speak out against poor quality software. *The Ultimate Amiga Buyer's Guide '94* is your definitive one stop guide to all you need to know about Amiga software and hardware.

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THE ULTIMATE AMIGA BUYER'S GUIDE '94
OUT NOW IN ALL GOOD NEWSAGENTS

Textures

John Kennedy looks at some more hot new textural and editing tools for all Amiga image readers.

This image demonstrates the nice marble and cork textures from Alternative Images Production's set of textures.

Alternative 3D Textures

Last month in the pseudo-regular 3D spot, the *Imagine*-compatible program *Essence* made a colourful appearance with some lovely organic textures. This month we're back to some less up-to-date rendering technology with some good old-fashioned bitmaps.

If there is one problem with the procedural textures such as those generated by *Essence*, it's the fact that sometimes it can be hard to create a particularly natural scene. I'm not knocking *Essence*, but there is still a case for some good bitmapped textures – especially if you dabble with *Real 3D* rather than *Imagine*.

Getting hold of suitable images can be a bit of a problem, because if you are trying to produce top-notch images the bitmaps need to be extremely clear and colourful. In the past I've had limited access to a professional artwork company's scanning facilities and the results from ordinary colour photos are simply astonishing. The test of a good image is to render it in 16 colours – if it still looks good, then it's good enough to use in 24-bit images.

Unfortunately not everyone is lucky enough to know my mate Dan, the scanner operator, which means not everyone can get hold of professionally-scanned images.

The alternative? Alternative, of course – the UK company synonymous with Amiga image rendering. Alternative are offering volume two of a 12-disk set of textures ready for you to play with in your favourite rendering program, supplied neatly packed into a video cassette box. Each disk contains only one texture, but before you start complaining about value for money, the disks are crammed with many different versions. For those with memory to burn (or at least 2Mb of Fast memory) there is a full 24-bit version, and for those less well endowed there are HAM and 8-colour IFF files. An image suitable for bump mapping is also included. No matter what rendering program or Amiga you use, there will be at least one form of each picture you can use.



Texture overdose – this image shows just four of the dozen 24-bit textures available in the set.

100% NATURAL

The textures concentrate on natural surfaces, so you'll find plenty of marble and stone finishes – perfect for adding a bit of reflection and specularity and being used as floors and table tops. Of course, the best part of image rendering is using ordinary things in different ways, and it's when you start to wrap otherwise boring objects in semi-translucent undersea stones or highly reflective tree bark that you begin to get really interesting results.

Included in the set, but available separately if required, are two extra disks aimed at *Imagine* users. These disks are

TEXTURES: BITMAPPED OR PROCEDURAL?

Most 3D rendering programs offer a way of controlling the appearance of an object by adding a texture. Often the texture is 'bitmapped', which is to say it's nothing more than a picture created with a paint program or digitiser.

Programs such as *Imagine* and *Real 3D* also offer procedural textures, which create the finish by means of mathematical formula. The advantage of procedural textures is that very little memory is required – all the details are generated 'on the fly' pixel by pixel. Although capable of creating some stunning results, it is often the case that a more natural or realistic texture is required. In these situations, you can't beat a well-drawn or digitised bitmap.

The disadvantage with bitmaps is that they can consume a lot of memory very quickly. It's only possible to use half a dozen 24-bit textures in an image before an Amiga with 8Mb of RAM keels over.



packed with projects which will help new-comers get to grips with some of the more tricky parts of *Imagine* – an excellent idea, and one which helps to overcome the truly abysmal manual *Imagine* comes with.

CONCLUSION

The textures are the main focus of the kit, and, to be honest, I was a little disappointed with their quality. All the images seemed to be digitised at a fairly high resolution, but there is a slight but definite colour cast and a fading towards the edges.

After looking at some of the images taken from PhotoCDs and professional scanners, I have to say I've seen a lot better. I wouldn't feel particularly happy about using them as backdrops for multimedia presentations as suggested, especially as the limited size (400x400 maximum) means overscan is a no-no.

However, when put to their primary use as bitmapped textures in rendering programs, any flaws are quickly forgotten. All rendered scenes will be improved beyond measure by the addition of some realistic textures and that's exactly what Alternative offer by the dozen. Apparently, volume 3 of the growing set of textures is in the offing, and this time the images will be full overscan and JPEGed. Even better, there will be a large collection of *Real 3D* objects from Alternative's own library – and we'll bring you a review as soon as we get it. CU

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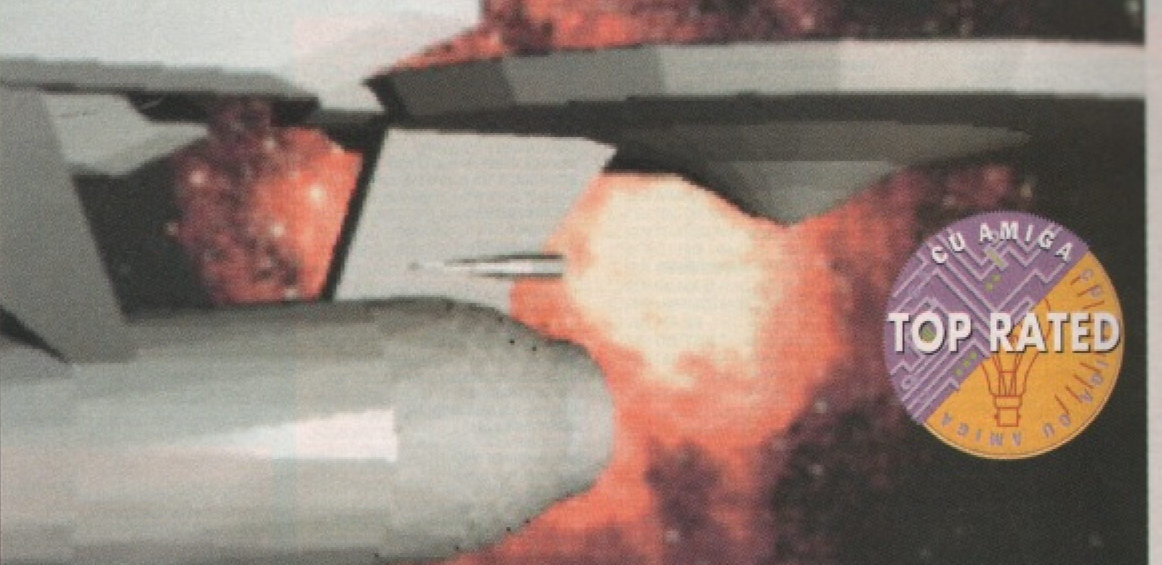
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EASE OF USE	80%
As easy to use as your Amiga rendering program.	
VALUE FOR MONEY	75%
Lots of disks, and useful tutorial extras.	
FLEXIBILITY	75%
Not a particularly wide choice of textures, mostly stone and marble. Other volumes even out the subject matter.	
EFFECTIVENESS	85%
Good textures add the final touch to any image.	

"Fine software from the Amiga image experts."

OVERALL 80%

Object Interface Junior



Above: To boldly go where no object has gone before – into Real 3D with its Depth of Field rendering.

OBJECT INTERFACE JUNIOR

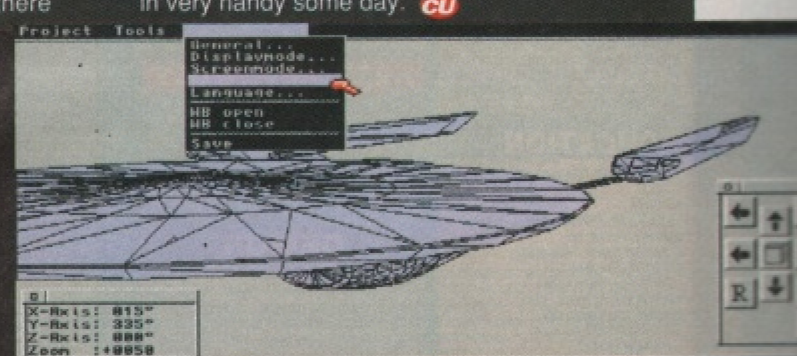
For some weird and time warping reason we seem to have a complete repeat of last month's issue of CU, for not only do we have a texture program to look at, but a new 3D object editor as well.

Object Interface Junior (OBI) is a similar program to *Pixel 3D Professional* in that it converts 3D objects between formats. But its one big advantage is that it deals with the only major criticism I levelled at *PixPro* – support for *Real 3D* objects.

Although the Amiga IFF standard works very well for swapping images and sounds, there isn't a standard way of swapping objects between rendering program – a spaceship created with *Imagine* cannot be directly loaded into *Real 3D* and vice versa.

The big problem is that *Real 3D* works differently from other rendering programs in the way it constructs objects from primitive shapes (cubes, spheres and so on), stretched and tweaked in various ways. Most other rendering programs use triangular or polygonal facets to make up the objects and apply smoothing algorithms to remove any rough edges. Translating between the two forms is difficult, but not impossible – after all, *Real* comes with a program which converts *Sculpt* objects.

PixPro doesn't come with such an option, which means a two stage operation in any translation. The good news is that OBI will save Real 3D objects but the bad news is that it won't load the them. This means there is still a gap in the market for the perfect image rendering program.



At last I can load all my favourite *Imagine* objects and re-save them directly for *Real 3D*. *OBI* will display the object in wire frame, solid or colour.

OBI is a German program. There are two reasons I know this: the manual is full of stilted grammar, and the requesters all say 'Nein' and 'Ja'. Obviously this should be fixed as soon as possible – I'm not xenophobic, but I really don't know what 'nicht zeichnen' means.

Depending on the price and availability of this program, it will provide some serious competition to the rather expensive *PixPro*. It lacks any editing features, but it does swap objects between all the major programs which means it could come in very handy some day. CU

FORMATS

Object Interface is a very flexible program, in that it uses external loading and saving modules to support different object formats. Currently OBI comes with the following loaders: *Caligari, Imagine, Reflections, Sculpt-4D* and *Videoscape*. It also comes with the following savers: *Caligari, Imagine, Real3D, Reflections* and *Sculpt-4D*.

You may find that, due to the translation process, objects start to use up a lot more memory than they did previously in another format. For example, a logo drawn in *Deluxe Paint* and converted to an *Imagine* object will use a heck of a lot more RAM while OBI turns it into a *Real 3D* object.

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EASE OF USE	90%
Apart from some non-English messages, very intuitive.	
EFFECTIVENESS	89%
Slow at times, but all but one object tested worked fine.	
FLEXIBILITY	83%
Most of the popular image rendering formats are supported – good to see Real 3D.	

"Serious competition to the rather expensive PixPro."

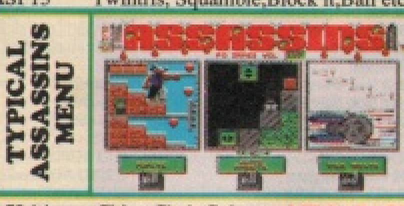
OVERALL 91%

Blitterchips PD Library
NBS PD Library
Vally PD Library
are
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Assassins Game Compilations

The best selection of PD games ever assembled anywhere now all autoboot on A1200 (though not all the games will run) Here are a selection of the most popular!

ASI 1 Tanx, Rollerpede, Avatris Amigoids
ASI 2 Invaders,Bally 2,Missile Command
ASI 3 Megaball & Drip MEGAPACK
ASI 6 Pacman, Downhill Challenge, Welltrix
ASI 9 Features Battle pong & Blizzard
ASI 10 Escape, Pipeline, Pickout & Sys
ASI 11 Dad, Connex,Reversi Towers & Trippin
ASI 12 Llamatron, Car, XFI. MEGAPACK
ASI 13 Twintris, Squamble,Block it,Ball etc



ASI 14 China Chal. Columns MEGAPACK
ASI 15 Battlecars Lettrix & Mambamove
ASI 16 Wastelands, Mission X, Pacman
ASI 17 Tomcat, Defenda, Jetman, Bugblaster
ASI 20 Microbes Hollywood trivia, Coin drop
ASI 21 Zeus Tettrix Battlements & Dragontiles
ASI 22 Lemmingoids,Wizzys Quest, Mouthman
ASI 23 Quick money,BIP,Interferon, Arcadia
ASI 24 Revenge of camels, Plus. MEGAPACK
ASI 25 Mr Brick,Copper,hemeroids,E Type
ASI 26 Superpacman, Smashtv MEGAPACK
ASI 27 Card games. MEGAPACK O' CARDS
ASI 28 Doody, DrMario, Invaders2
ASI 29 DOG, Rome, Nova, B-Bal, Quadrix
ASI 30 Bounce & Blast, Total Fire Tank attack
ASI 31 Arazmaz,Crazy pipe, revolution
ASI 33 Hyperball & War
ASI 34 Trailblazer, Yelp, Qbic, Rushour
ASI 35 Poing,Snakepit,Cybernetix Jump n roll
ASI 36 Wond`land,DonkeyKong MEGAPACK
ASI 37 Klaktris, Ghostship, Paccer etc
ASI 39 More card games MEGAPACK
ASI 40 Disk full of sliding block puzzle games
ASI 41 Pacman, Hellzone. MEGAPACK
ASI 42 Galaga, Intuder Alert MEGAPACK
ASI 43 Interlock, Roulette, Octothello
ASI 44 Nibbler,Mouse Impossible,Roll on etc
ASI 45 Dtris,Paccheese,B-Castle Teserae etc
ASI 46 Amiga Q, City,Checkers, Ouch etc
ASI 49 Deathbringer in space Crazy Sue 1+2
ASI 51 Lamers, Fighting Warrior Shapes
ASI 53 Venus Invaders,Mastermind etc
ASI 54 Serene,Serene II & Car Wars
ASI 55 Cli-tris, Pacatac & Asteroids
ASI 57 Poo-poo, Dominoes, Dizzy, Squirm
ASI 58 Super raid 4 Magnatron & Maiessae
ASI 59 Turbo thrust GX200 & Leedings
ASI 60 Pipe master2 Alien Hunter & Checkers
ASI 63 Nautilus Frenzy & Drive Iff
ASI 64 Oblivion(fab!) Breakout con kit etc
ASI 65 Paranoids, Chess, Word Puzzles
ASI 66 Cow wars Amastermind & Asokoban

ASI 67 Siege of the Beast,E Type II & Vektor
ASI 68 Demolition Mission,Bounder & Atoms
ASI 69 Klondike,Celestial Poker Bridge etc
ASI 70 Wangle & Tetris pro. MEGAPACK
ASI 71 Numerix, Battleships MEGAPACK
ASI 73 Lexess, Concentration & Challenger!
ASI 74 Crazy pipes II,Bombjacky & Chute
ASI 76 **Gnu Chess**, Cubus & Gerb
ASI 77 Balloonacy, Cliff hanger & Descender
ASI 78 Little Boulder, Headgames, Fruit Panic
ASI 80 Army Miner Flip it,Golf The Gallows etc
ASI 81 Amos Defence, Thunder Tron
ASI 82 Artillerus Shuttle run, Arcade Volleyball
ASI 83 Loadsamoney, Pong & Spider(cards)
ASI 86 Lords of Host, Legend of Lothian
ASI 87 Aztec Challenge,Jonus Fullstrand
ASI 88 Defender, Relayer & Mosaic
ASI 89 Megaball 2.1, Cluedo MEGAPACK
ASI 92 Bill, Oblidox, & Solitaire Sampler
ASI 94 Super skoda challenge, Giddy
ASI 95 Premier pics,Tangle, Super league man
ASI 96 **Dungeon Flipper, Backgammon**
ASI 100 Bloadrunner, Monaco MEGAPACK
ASI 102 Fruit Salad, Pacsim MEGAPACK
ASI 105 Particle man,Rummy
ASI 106 Cosmoroids II, Micro market
ASI 107 Serene III, 4 row 3d Equilog & Yacht C
ASI 109 Psyco blast, Hamburger, Thrallbound



ASI 110 Space rescue, Tiles, Zerg, Huskerou
ASI 113 Trek trivia, Popeye MEGAPACK
ASI 114 Insectoids II & Yum yum
ASI 115 Star trek SEU,Egyptian run, Slime line
ASI 116 Blue Diamond 4, TSCH, Sorry
ASI 117 Airwars, Youpi, Triple Yahtzee
ASI 118 Zombie Apoc, Last Tetris, Army Mines
ASI 119 Robouldix, Speed, Trik Trak
ASI 123 Artilleros II, Lamerbug, Yahtzee
ASI 124 Mr & Mrs(not 1200), Backgammon
ASI 125 Marble Slide, Gladstones Name Game
ASI 126 Short Out, Kynaston Kid, Dodge Ems
ASI 128 Space Inv, PacMan Delux, Solar Wars
ASI 134 Cross Circuit, Fwuff, Circuit Wars
ASI 135 Gammon, Ack-Ack, Pipeline 3, Tetrix
ASI 136 Hot Blox, Super Pong, Snifburk
ASI 137 Blockster, Escapade, Squigs
ASI 138 Galactoid,Scorched Tanks,Air Hockey
ASI 139 The Big Game, Bat Dog, Amiganoid
ASI 140 Fatal Mission 2, Chronic the Hedgehog
ASI 142 Rueda, Galaxy 93, Courtroom

MORE DISKS ALWAYS ARRIVING
RING FOR LATEST

Business

PB 001 AMICASH Dosh management program
PB 002/3 ANALYTICALC Superb spreadsheet
PB 014 RIM DATABASE Fully relational
PB 015 TEXTPLUS V3.00 The BEST Wordpro
PB 017 VISICALC Simple to use spreadsheet
PB 020 TEXT ENGINE 4.0 The latestVersion
PB 022 BBASE III v1.3 Super database
PB 023 FORMS UNLIMITED Form creation
PB 024 LAST WILL & TESTAMENT Examples
PB 030 MONEY PROGRAM Home accounts
PB 031 EASYCALC New Fast spreadsheet
PB 034 ILLINOIS LABELS Label program
PB 036 CHECKBOOK ACCOUNTANT V2.01
PB 038 BUDDBASE Brill beginners D`base.

Education

PE 007/8 LEARN & PLAY for ages 5-10 yrs
PE 021/4 SCIENCE Very good four disk set!
PE 026 WW II FACTS Good historical program
PE 030/2 GUIDE TO ELECTRONIC MUSIC
PE 035 KIDS DISK 1 Alphabet & Colours
PE 037 HOORAY FOR HENRIETTA Preview
PE 038 HENRIETTAS SPELLS Preview
PE 039 COLOUR IT Excellent colouring pad
PE 040 HOW EARTH BEGAN Picture book
PE 042 CHILDRENS FAVOURITES More fun!
PE 046 TOTAL CONCEPTS DINOS 3 Preview
PE 047/9 BACK TO SKOOL 1, 2, & 3 Kids
PE 052 COMMUNICATE Sign Language
PE 058 WORD FACTORY Brill spelling

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CT 002 JURASSIC DINOSAURS CLIPART 1
CT 003 JURASSIC DINOSAURS CLIPART 2
CT 004 CRETACEOUS DINOSAURS CLIPS 1
CT 005 CRETACEOUS DINOSAURS CLIPS 2

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Utilities

PU 015 BIORYTHMS, and STARCHART Good
PU 174 ASTRO 22 Professional astrology now V3.0
PU 183 AMYGEN Excellent geneology program
PU 112/3 SOMETHING FOR NOTHIN Video Utils
PU 121/2 TV GRAPHICS Dpaint backdrops&Fonts
PU 129/30 VIDEO APPLICATIONS Video utilities
PU 198 VIDEO WIPES Masks & fades Dpaint 3/4
PU 215 CAPTIONATOR Shareware video titling
PU 286 INSCRIPT Program for Video titling
PU 037 D-COPY The best PD disk copier
PU 064 HARDDRIVE UTILS MR.Backup, FixDisk
PU 067 IMPLODER V4.0 Mega crunching Util
PU 080 MESSY-SID 2 Read/Write PC Files, Brilliant
PU 189 TRONIK VIRUS KILLERS Virus killers, docs
PU 012 ASI GRAFFIX UTILS Graphics convertors
PU 063 HAMLAB PRO V2.08 Convert PC pics
PU 139 GFX CONVERTERS PC>Amiga gfx
PU 065 ICONMANIA Program icons & more
PU 066 ICONS Cramm packed with icons
PU 124 ULTIMATE ICONS Iconmaster,Iconlab
PU 221-225 8 COLOR ICONS Hundreds of icons
PU 192 SID 2 Get this! Shareware directory util
PU 205 PC TASK PC Emulator Version 2, VGA
PU 207 MULTISID Combine SID2 & Multidos
PU 272 GOLF RECORDER Database for golf scores
PU 279 V MORPH V2.30 PD morphing prog!
PU 280 POOLS WIZARD Pools prediction
PU 287 NUMPAD Numeric keypad for A600
PU 355 SUPERDARK Screen blanker
PU 367 PE LABEL PRINT UTILS Useful
PU 326 PLOTTER Plots two dimensional functions
PU 071 JR COMM 1.02 Modem comms package
PU 349 NCOMM V3.00 Comms package
PU 059 FONTS & SURFACES Backdrops & fonts
PU 185/8 COSMOPOLITAN FONTS for D'Paint
PU 201 MALICE FONTS Tiny fonts for Dpaint
PU 231/5 PAGESTREAM FONTS 5 disks fonts
PU 257/61 PAGESTREAM FONTS 5 more disks
PU 236/7 SCOPE197/8 Adobe type fonts, 2 disks full
PU 264/8 OUTLINE FONTS For Pro pagev3 only!
PU 319/23 OUTLINE FONTS For Pro page 2.1 or 3
PU 331/43 COLOUR FONTS 13 disks of Assignables
PU 356 FONTFARM Contains 55 large & Small fonts
PU 358 PPAGE TEMPLATES,GENIES etc. Useful
PU 359 PRO PAGE HELP DISK Extremely useful
PU 109/10 CLIPART Structured clipart for Ppage
PU 203 SCOPE 184 Utils & clips for Ppage
PU 230 PRINTER DRIVERS Most popular covered
PU 352 HP 550C & Cannon Bubblejet Printer drivers
PU 357 CANON PRINT STUDIO For BJ owners

Demos

PLEASE NOTE (NT) means NOT AMIGA 12…

PD 005 AMOS 3D DEMO Shows some great eff…
PD 068 PHENOMENA ENIGMA Absolutely brillian…
PD 093 SCOOPEX CHROMIUM Superb dem…
PD 094 SCOOPEX MENTAL HANGOVER Wow!…
PD 097 SILENTS GLOBAL TRASH Incredible…

PD130/34 ALCATRAZ ODDESSY
Awesome 5 disk, 35 minute spacey animation…

PD 142 FINAL CONFESSION Music & Plasma eff…
PD 154 DECAY GET FROGGED Superb qua…
PD 165 DARK DEMON Mega demo …
PD 170 PIECE OF MIND Good 3D vector eff…
PD 171/2 SILENTS EXPOSE(2) Incredible…
PD 177/8 TRSI TIME ZONE Some good eff…
PD 182 SPACEBALL Absolutely brill, needs 1meg…
PD 183 DIGITAL LETHAL EXIT Good vectors dem…
PD 185/6 ANDROMEDA MIRROR Fab Music &…
PD 188 SANITY WORLD OF COMMODORE S…
PD 189/90 SILENTS DEMON DOWNLOAD Fab de…
PD 200 PHOENIX DEMOS inc Flashy rave dem…
PD 202 TECHNOLOGICAL DEATH Freaky tech…
PD 206 MELON HOW TO SKIN A CAT Nice eff…
PD 207 NEMAL BOUNDLESS VOID Good eff…
PD 209 STONE ARTS ATMOSPHERE Nice dem…
PD 210 ANARCHY 3D DEMO Superb…
PD 212 KEFRENS DANE A short but nice de…
PD 213 TROJAN TECKNO TRACKS Amazing eff…

Music

PM 016 BEATLES SONIX Nice mu…
PM 026 DEPECHE MODE MUSIC Trackered tu…
PM 121 NIGHTBREED MUSIC DEMO 8 Rave mu…
PM 134/5 SOUNDS OF SCIENCE Absolutely Brill…
PM 155 VINE G-RAVE 5 more good rave tra…
PM 162 MORE MED TUNES Fab tunes by Alex S…
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PU 163 CLIP ART 12 Signs (Bears, Christmas, Misc)
PU 164 CLIP ART 13 Sports
PU 165 CLIP ART 14 Work and Trades 1, Transport
PU 166 CLIP ART 15 Work and Trades 2

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CCL 6 Macau - Mississippi
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CCL 16 Aircraft / Cars
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CCL 61 - 62 Inventors
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PD 201 1200 INTROS Yes, some AGA intros
PD 187 HOY AGA DEMO 1st 1200 demo,a must
PD 218 VIVID: ABSTRAX PIG AGA Colourful demo
PG 262 AGA CHESS Needs 4mg of ram to play
PG 258 AGA TETRIS 1200 tetris game & more
PG 305/7 AGA KLONDYKE Nice quality cards (3)
PS 117/8 NIGHTBREED AGA SLIDESHOW Super(2)
PS 119 CYNOSTIC SLIDESHOW Superb pictures
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PA 131/40 STEVE PACKER10 disk set of Steves anims
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Latest Releases

PG 298 FATAL MISSION 2 Super blast shoot em up
PG 308 HIGH OCTANE Super driving game
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PG 310 PUZZWORD Sliding block puzzle game
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PU 386 KITE SIMULATOR Works with no wind
PU 387 REORG Good hard drive organiser
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PU 398 AMIGA/CASIO DIGITAL DIARY LINK
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PE 054 ARTISTIX Superb shareware art package
PE 056/7 READ & LEARN Little pigs spoken and text
PA 149 SPAR TREK 6 Clever CD32 advert
PP 120/3 LAST STAND ON HOTH Space anim (3mb)

PD 216/7 A TRIP TO DEEP BASE
Mega rave demo better than Jesus on E`s !!!!

PD 220 LEMON: RINKaDINK Classy new demo (NT)
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PM 209 LSD XMAS PACK Great selection of tunes
PM 210 AMIGA XMAS MUSIC Traditional style
PM 211 MBC: BASS IN YA FACE Hardcore techno
PM 213 MIGAMASTER: Open Your Eyes-Quality mix
PM 216 DUAL CREW: CHROMATIC Great music
PS 127 AKIRA PICS Super Jap art pictures
PS 128 MAGIC FACTORY Trek pics (A1200 0nly)
PT 087 CHURCH MUSIC Htmns etc done in Sqnix
PT 088 X-BEAT Excellent drum machine
PB 040 PAY ADVICE ANALYSER 3 Latest version
PB 042 EASYCALC PLUS Dos 2.0 or higher

Animations

Note:All anims require 1mb of memory unless stated (e.g. 3mb = 3 megabytes required) Most of these animations come on more than 1 disk. (e.g. PA 091/3 is a 3 disk set)

PA 072 THE JUGGLER A classic amiga demo
PA 074 WALKER 1 vs The Helicopter - Mega
PA 075 WALKER 2 vs A2000 A classic
PA 091/3 TURBINE, STEAM & PETROL (3) Engines
PA 101 DOLPHIN DREAMS Great Dolphin anim
PA 119 STEAM ANIMATION V2.0 Now with sound
PA 120 TWO STROKE PETROL ENGINE Super
PA 141 STIRLING II ENGINE Another fab engine anim
PA 143 XMAS ANIMATION Amusing animation
PP 025/27 STATION AT KHARN (3) Incredible (2mb)
PP 046 SWEET REVENGE Coyote vs Roadrunner(2mb)
PP 004/7 AUTOMATED LIGHT (4) Galactica (3mb)
PP 008/10 BUZZED (3) Great anim of wasp (2mb)
PP 077/84 THE HAUNTED (8) Tremendous (3mb)
PP 113/4 CALVIN & HOBBES (2) Super Cartoon (3mb)

Agatron Animations

AGA 01 RED LOTUS Spinning down the road. Fantastic
AGA 03 STAR TREK Shuttle fly past - Great
AGA 07 STAR WARS FIGHTER Doing loops etc
AGA 10 STAR TREK Enterprise in dry dock. Incredible
AGA 22 ENTERPRISE APPROCHING Stunning
AGA 23 FLEET MANOEVRE Stunning animation
AGA 25 THE RUN A suberb car chase
AGA 28 SHUTTLE & ENTERPRISE Fab
AGA 29 MILLENIUM FALCON The ship being chased
AGA 36 BIRD OF PREY, Loop the loop animation
AGA 39/53 AGATRON SPECIAL! Yes, a 15 disk anim

Eric Schwartz

PA 039 AMY VS WALKER Cute & sexy! 1.5mb
PA 040 BATMAN vs JOKER Very funny
PA 045 STEALTHY II Mig-29 vs Stealthy
PP 001/2 ANTI LEMMINGS (2) Brilliant Spoof (2mb)
PP 011/12 DATING GAME (2) Very witty! (3.5mb)
PP 016 GULF WAR Brilliant fun (2mb)
PP 050 UNSPORTING Wicked aerotoon (2mb)
PP 070/1 LEMMING REVENGE(2)One of the best(2mb)
PP 119 BAITMASKING Another fun anim (2mb)
PP 101/4 QUALITY TIME (4) Superb (5mb)

Charlie Cat

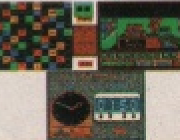
PP 051/2 CHARLY CAT Super Shwartzlike cartoon (2mb)
PP 053/4 C/C AT THE BEACH 2nd fab anim (2mb)
PP 057/9 C/C CATCHES A CANARY Fab! (3mb)
PP 065/6 C/C SNOWJOKE More great fun (2mb)
PP 108/10 C/C IN SICKNESS & HEALTH!(3) (3mb)

Central Licenceware Collection

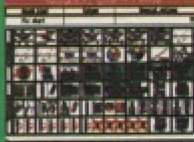


Everyone should learn to type, and now is the time with this popular tutor. The structured lessons will soon have you wizzing around the keyboard at a fraction of the price of a commercial typing tutor.

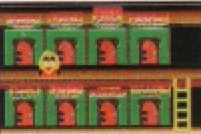
CLU 03: TYPING TUTOR £3.50


3 Good educational games. **ClickClock** teaches the time, **Funtimes Tables** and **Go Shopping** are practical help to learning maths. All nicely presented and colourful to amuse children.

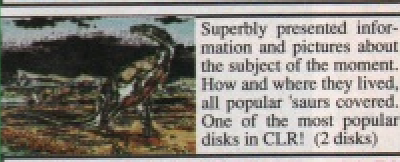
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If you need display graphs, this is the one. Line, Bar, 3d Bar, Pie, etc. Input 'live' or through a script file. Inbuilt print facility in mono or colour. Docs, tutorial, & examples included.

CLU 04: ALPHAGRAPH £3.50


8 Different fun and learning games for young children. The endorsement for this disk is that the follow up (Fun with Cubby 2,CLE 45) is also a very popular disk. Great fun for children.

CLE 28: FUN WITH CUBBY £3.50


Superbly presented information and pictures about the subject of the moment. How and where they lived, all popular 'saurs covered. One of the most popular disks in CLR! (2 disks)

CLE 01: T.C. DINOSAURS £4.50


4 classic fun games for young children all on a dinosaur theme.
Possibly more fun than learning, but bound to be popular with the jurassic connection.

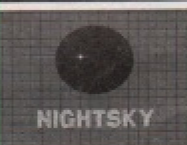
CLE 29: PREHISTORIC FUN £3.50


Another Total Concepts production, looking at our planet and its neighbours. Plenty of info and some really great pictures on 3 disks. (Also available: CLE 35, Solar System 2, £4.99)

CLE 03: T.C. SOLAR SYSTEM £4.99

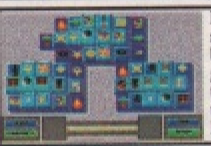

Over 700 screens of scrolling platform action, the quality of which is only surpassed, by the best commercial games. Run, jump avoid the nasties and solve the puzzles

CLG 28: TIME RIFT £3.50



A great disk for star gazers. Select a time & place and the program will show you the night sky. Click on any of the dots and you will told what star it is. Praised in Astronomy Today.

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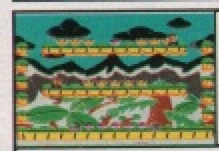

Nearly all of you will have seen or played this game before, its the classic tiles game. The big plus here, is the great, distinctive patterns, and alternative tile layouts. Best selling game!

CLG 08: DRAGON TILES £3.50



A good program for budding lead guitarist. Presents you with dozens of practice scales to improve finger dexterity and flexibility. Variable speed control. (See also CLE 05 Achord for chords)

CLE 15: FASTFRET £3.50


This should be commercial but luckily it isn't! A brilliant platform game on the lines of Rodland. Kill the baddies, collect the fruits, then sort out the end of level guardians. Super quality!

CLG 30: CAPTAIN K £3.50

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CLG 17	IMBRIUM Excellent graphic adventure	£3.50
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CLG 25	WHITE RABBITS Super puzzle	£3.50
CLG 27	SHYMER Kids adventure	£3.50
CLG 28	TIME RIFT Good platform	£3.50
CLG 30	CAPTAIN K Rodland type platform	£3.50
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CLU 32 POWER TEXT
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F1 RACER V2.0

game

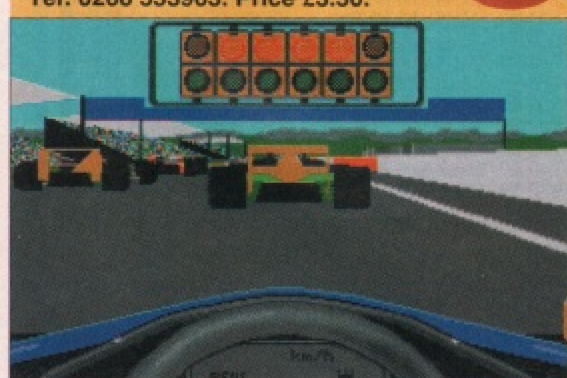
Lummocks! This is a bit tasty, and no mistake. Until someone decides to convert *Virtua Racing* to the Amiga, this could be the closest you'll come to it without playing the real thing.

Well, it's not exactly a carbon copy of *VR*. To be honest, it's quite a way behind *VR* in terms of breath-taking scenery. But if you don't mind losing the canyons and suspension bridges, this should be right up your pitlane. On a 1200, it clocks up a slithery-smooth 50 frames per second for a good deal of the game! Even on a 500 it's pretty pacey. Like *VR*, you get a view from the cockpit that can be zoomed out as you hurtle round the track to reveal a couple of rear 'chase plane' views. The cockpit view is the fastest, and you even get the driver's animated hands on the steering wheel for extra realism. There are also a couple more views – one that follows the car from the trackside, and another that looks back towards the car from the front.

There's a full game in there too, complete with practice laps, qualification and pitstops. If that isn't enough, simulation fans can get their rocks off on all sorts of wing adjustment and gear ratio options. Alternatively, mindless boy racers can drive the wrong way round the track and see how many opponents they can write off. I suppose this should finish with a Murray Walker joke, but I can't think of one right now. Sorry folks.

Available from: Essex Computer Systems, 118 Middle Crockerford, Vange, Basildon, Essex, SS16 4JA. Tel: 0268 553963. Price £3.50.

90%







HYPNOSIS

demo

I won't go into too much detail with this one, as it's another of the many good Jesus on Es-inspired demos without much new on offer (dated hardcore soundtrack with strobes and wobbly colour patterns), but it does have a nice user mode at the end. You select the effects with the function keys as the music plays in the background – more of this in future demos please!

Available from: Cynostic PD, Office O1, New Enterprise Centre, Little Heath Industrial Estate, Old Church Road, Coventry, CV6 7NB. Tel: 0203 681987 Disk no. D0220. Price: £2.

80%



TIME RUNNERS

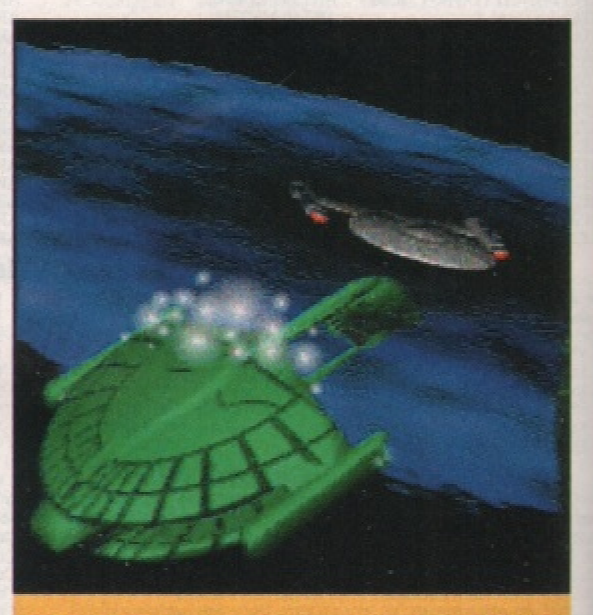
game

Looking strangely commercial, *Time Runners* is a weird arcade adventure with some surprisingly good graphics for a PD game. Don't ask me what the plot's all about – let's just say it's something to do with space. Anyway, it's a combination of adventure-type conversations and so on, complete with nice full-screen graphics showing locations and characters, and arcade-style sections. I'd imagine this was originally intended for commercial release, as it's obviously had a lot more time spent on it than most PD games. Even so, it's not the most addictive arcade adventure I've played, but it passes the time better than a morning with Anne and Nick.

Available from: Cynostic PD, Office O1, New Enterprise Centre, Little Heath Industrial Estate, Old Church Road, Coventry, CV6 7NB. Tel: 0203 681987 Disk no. G0215. Price: £2.

71%





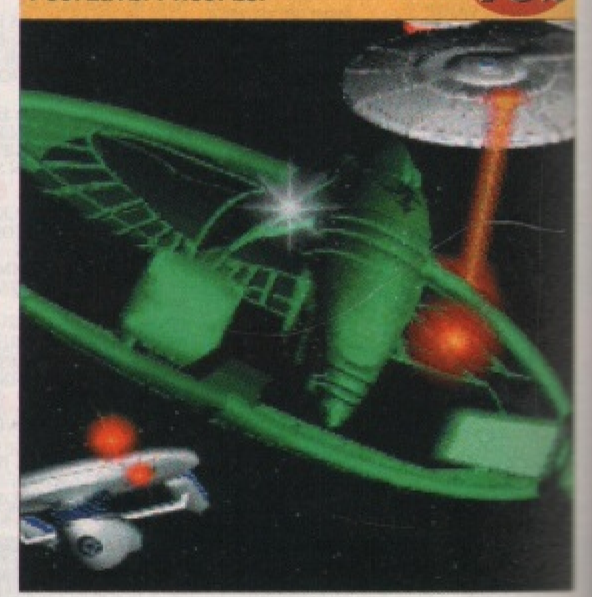
HOLODECK

slideshow

Hailed as a rival to the renowned ray tracer Tobias Richter, the man responsible for our November issue's *Frontier Elite II* cover, Mark Platts has compiled this two-disk set of shiny Star Trek Next Generation space scenes. Tobias needn't worry though, as there's quite a bit of work to be done on these before they reach his standards. Star Trek The Next Generation is the theme, so you can expect pictures of all your favourite trekkie spaceships. Some of the pictures suffer from a strangely distorted perspective, and the colour schemes are often overdone, but there are still some good pics on show for tracers or trekkers.

Available from: Cynostic PD, Office O1, New Enterprise Centre, Little Heath Industrial Estate, Old Church Road, Coventry, CV6 7NB. Tel: 0203 681987, Disk nos. P0072a+b. Price: £3.

78%



TROOP JUGERNORT PART 1

interactive comic

Anyone remember *Comics* – that brilliant interactive comic game on the C64? Well, this isn't anywhere near as good, I'm afraid. It's basically a partially animated Manga-style comic, with a little beat 'em up section in the middle. This involves fighting off a pack of wolves for a few seconds. If you get through that alive, then you're shown the remainder of the comic. If there was more of it, this could be quite entertaining, but it's over before it's begun. Can be played back to back with the forthcoming parts of the series.

Available from: Five Star PD, 48 Nemesia, Amington, Tamworth, B77 4EL. Tel: 0827 68496. Price: £1.69 including P+P.

60%



DOCTOR WHO: THE 60s

multimedia

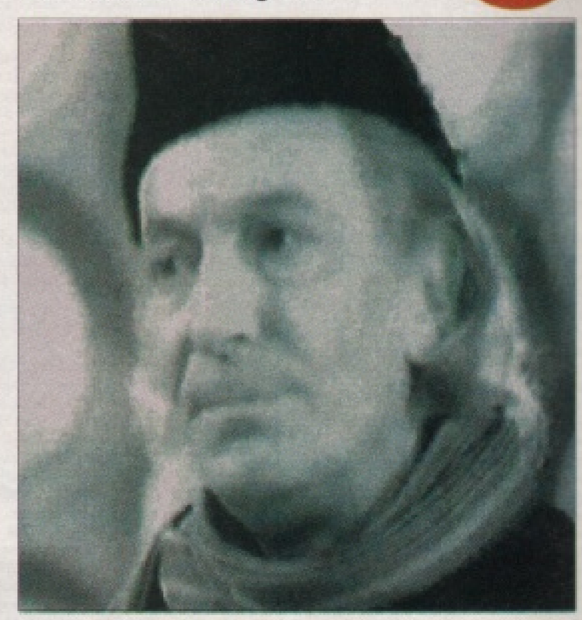
If you're the kind of person who likes to know Patrick Troughton's favourite breakfast cereal (and whether he likes sugar on it or not), then you'll jump at the chance to get stuck into this two-disk Dr Who trivia set.

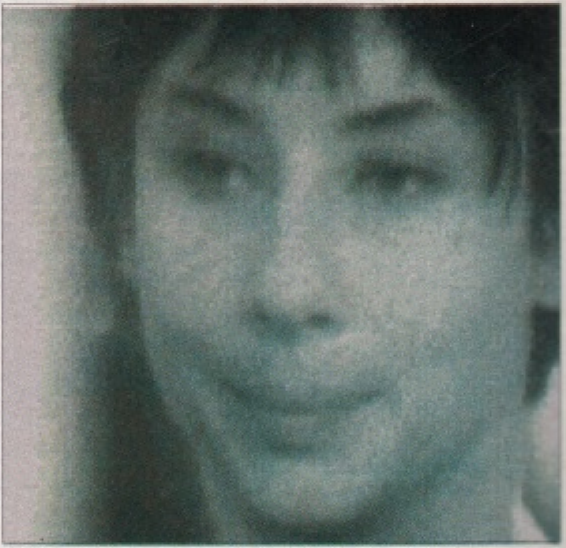
It's a multimedia thing (as they say these days), which means that it's got text and graphics tied together with *Hyperbook*.

Unfortunately, it's a very simple affair, with reams of text accompanied by digitised mugshots of the characters and enemies. Part one concentrates on the William Hartnell era, while the second is devoted to the episodes with Patrick Troughton.

Available from: 17 Bit, 2/8 Market Street, Wakefield, West Yorkshire, WF1 1DH. Tel: 0924 366982. Disk nos. 2812a+b. Price: £3.50 including P+P.

67%







RINK A DINK

demo



Designer demos are Lemon's speciality. Rink a Dink is another of their typically slick productions, with a stream of excellent plasmas and zooms, with loads of other wobbly bits in between. There's a good soundtrack too, with lots of good percussion and bass samples all mixed up in a housey kind of style. It's a shame that most of the effects are enclosed in small boxes, rather than filling the whole screen, but other than that, it's most desirable.

Available from: Cynostic PD, Office O1, New Enterprise Centre, Little Heath Industrial Estate, Old Church Road, Coventry, CV6 7NB. Tel: 0203 681987 Disk no. D0216. Price: £2 including P+P.

82%

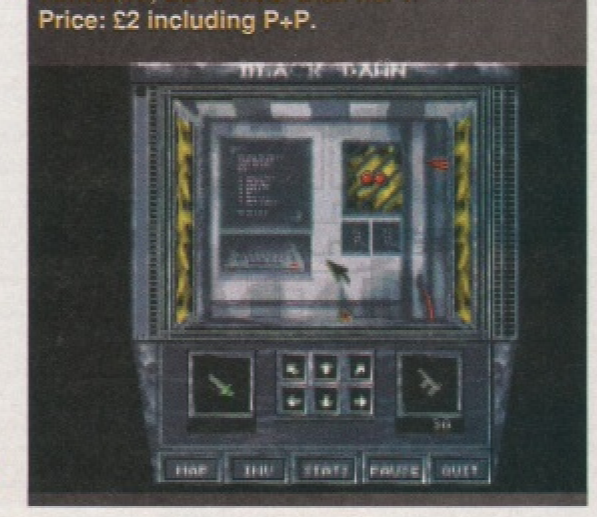
BLACK DAWN

game

It's *Dungeon Master* in a spaceship! Okay, so it's not as deep as *DM*, but it's got the walking around a 3D maze bit – with monsters too! The gameplay is pretty straightforward and involves getting from one end of a maze to the other, collecting cash and buying weapons along the way. Should you happen to meet a slimy green alien, you can splatter him across the walls with your current weapon, which could be anything from a knife to a rocket launcher. You don't get the fully animated 3D texture maps of games like *Legend of Kyrandia*, but you can still keep track of the flick-screen 3D graphics with the help of the map. Nowhere near commercial standard, but not bad for PD.

Available from: Pathfinder PD, 41 Marion Street, Bingley, West Yorkshire, BD16 4NQ. Disk no. 1. Price: £2 including P+P.

75%





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NEW TITLES

G264 **ELEVATION II** - Cute and colourful platform romp.
G265 **BONDMINE 13** - Boulder Dash at it's very best!
U300 **NCOMM V3.0** - Brand new version of this incredible comms package for Amiga modem users. The most popular one around.
S96/S97 **(2 DISKS) SHED TEARS** - Fantasy slideshow using the AGA chipset. •A1200 ONLY•.
G266 **GALAXY '93** - Looks like Galaxians. Nice scrolling back drop. •NOT A500•.
U301 **AREXX USERS REFERENCE MANUAL** - Extensive manual on the AREXX programming language. •NOT A500•.
G267 **BLOCKSTER** - Tron Light Cycles game with screen designer.
E53 **CHILDRENS FAVOURITES 2** - Six nursey rhymes with pictures, words and music to sing-a-long to.
U302 **AMOS Ncommand Designer v2.03** - Create Workbench 2.0 style front ends for your Amos programmes without the hassle. You design the screen with menus, buttons etc.. and save the source code and then simply load it into *AMOS*.
G268 **SLAMBALL** - Futuristic management game based on Speedball.
T32 **ABNORMLIA ISSUE 3** - The alternative disk magazine. No Amiga Features. From UFO's to Beer. Very weird.
E54 **STIRLING ENGINE ANIMATION** - Detailed cross section animation of a Stirling engine.
U303 **INVENTORY v2** - Business software to hold information on stock control, staff wages, plus a database for other information.
E55 **COMMUNICATE** - Learning tool for eight forms of non-verbal communications. Including sign language, morse code, braile, etc.
E56/E57 **(2 DISKS) AMERICAN FOOTBALL** - Massive tutorial on the complex rules and strategies used within this sport.
G269/G270 (2 DISKS) **18th HOLE** - Brilliant Golf game for 1 or 2 players.
S98 **SATURNE '93 SLIDESHOW** - Many pictures of different styles and subjects, from fantasy to Japanese cartoons. All V.good.
S99 **JURASSIC PARALAX** - Brilliant slideshow of many vicious Dinosaurs with added text information on their characteristics.
G271 **JELLY QUEST** - Highly rated 3D isometric arcade puzzle game against the clock.
U304 **TEXT ENGINE v4.1** - The BEST PD word processor just got better. Includes fully intergrated spell checker. A must!
U305 **SUPERVIEWER v2.4** - Slideshow creator with examples.
U306 **ELECTRONICS CAD** - Two programmes: ElectroCAD and Prototyper. Computer Aided Design programmes for Electronic projects. V.Good.
U307 **AMOS PRINTER ROUTINE** - Custom GFX printer routines for your Amos programming projects.
U308 **CG FONTS COLLECTION VOLUME 4** - Thirteen more Compugraphic fonts for DTP and Word Processors which use them.
T33 **RAGE ISSUE #2** - Disk magazine with News, reviews, Amos Help, Amiga DOS commands help, plus much more......
M141 **EAT THE BRICK** - Parody of Rave music!!!!!!
A159 **AIR ASSAULT** - Similar to Eric Schwartz's "ATF Agility" animation.
U309 **EASYCALC V1.0a** - The Best Shareware Spreadsheet money can buy. Look no further if you require one!!!
U310 **PAY ADVICE ANALYSER V3.00** - Latest version of this personal wages/salary database. Now faster and added features.
D162 **FRONTIER: ELITE II DEMO** - Rolling demo of this incredible game. Wow.
G272 **ASSASINS GAMES VOL # 136** - Hot Blox, Super Pong, Snifburk.
G273/274 (2 DISKS) **STARBASE 13** - Graphic adventure in the style of Monkey Island/Future Wars. Superb.
E58 **DESERT STORM HYPERBOOK** - Detailed account of the 100 hour ground offensive with maps and all.
A160 **GET FROGGED** - Amusing singing and dancing Frog routine. Warner Bros style.
U311 **EASYCALC PLUS** - Enhanced version of the EasyCalc spread sheet with pie charts, bar graphs etc.. •NOT A500•
E59 **STARVIEW** - Displays all the visible planets, stars and constellations from any location on earth, at any time. Zoom facilities, and Star search feature. Excellent piece of software.
G275 **POPEYE** - Conversion of the classic C64 arcade game. •A500 ONLY•
A161 **3 WAYS TO STOP SMOKING** - Give me nicotine patches any day. Sick humour. •REQUIRES 1.5 MEGABYTES•
E60 **CODE MUNGUS** - Highway code tester. Sign posts and verbal questions. Very good indeed.
E61 **WORLD GEOGRAPHY** - Interesting computerised Atlas.
A162 **SAVING CERTIFICATE ADVERT** - The Butterfly and frog cartoon from the TV ad.
G276 **THE GREAT ESCAPE OF BILLY BURGLAR** - Super new and original platform game.
G277 **3D GAMES SERIES MK1** - Three 3D Construction Kit games: DIY, OXO, CAR.
G222 **CHESS GAMES** - Two Chess games: GNU Chess, Chess 2.0 and top Chess tips file by an international Chess Grandmaster. Equal to or better than any other commercial Chess game currently around.
G278 **FRIDAY THE 13th PART X** - Run around the rooms and slaughter the inhabitants, but avoid the gun wielding cops.
G279 **MUGSIES REVENGE** - Gangster management game. Based within the prohibition days. Buy booze, set up bars and night clubs and get some henchmen to protect your interests and lots more.
G280 **BLACK DAWN** - Dungeon Master style game with an Alien Breed scenario. Superb graphics and loads of features.
G281 **SUPER PRIX** - overhead racing game with many tracks and car upgrades - for a price!
U312 **BUDBASE 1.2** - Ex CLR title, now Public Domain. Database which isn't restricted to memory size as data is read or written directly to disk each time (also hard drives), like commercial ones.
E62/63 (2 DISKS) **READ AND LEARN VOL.1** - Disk based story book for infants, with pictures, easy read text and digitised speech. The story of 'The Three Little Pigs'.
E64 **THE WORD FACTORY** - Neat spelling games for youngsters.
U313 **AGA UTILITIES** - Loads of A1200 only programmes eg: Kill AGA, Plasma, AGA Test, Check AGA, etc.. 25 progs in all.

EDUCATION

E3 **SUN CALCULATOR** - Calculates the sunrise and sunset times within a 2 minute accuracy.
E12 **UNITS** - Conversion programme. Includes:Speed, Volume, Mass, Time, Force, Density, Angles, Light, etc.....
E16 **CHESS TUTOR** - 4 Chess programmes from learning the game to taking part in classic games of history past.
E23 **TOTAL CONCEPTS - ASTRONOMY** - Loads of interest ing facts and beautiful digitised stills.
E24 **TOTAL CONCEPTS - DINOSAURS** - Want to learn about prehistoric Earth. Get this.
E32 **MOLEC 3D** - Generates 3D represenions of molecules. Up to 500 atoms at a time.
E36 **STEAM ENGINE ANIMATION** - Detailed, labeled animation of a Steam Engine.
E37 **FOUR STROKE PETROL ENGINE ANIMATION** - More of the same.
E42 **GAS TURBINE ANIMATION** - Plane engine animation.
E52 **COLOUR THE ALPHABET 2** - Familiarise kids with the alphabet, with digitised speech instructions. Excellent.
E43 **WW2 HISTORY BOOK** - Multi-media account of World War 2 account. Text and pictures.
E46 **LITTLE TRAVELLER** - Useful information on the worlds popular travel spots right down to electrical voltage.
E41 **FRACTIONS** - Maths teaching and testing programme.
E44 **THE MATHS ADVENTURE** - Maths problems intergrated into an adventure game.
E49/50/51 (3 DISKS) **DESKTOP GUIDE TO ELECTRONIC MUSIC** - Massive guide on all you wanted to know about music systhesis. Visual, audible - sound examples and speech.

BUSINESS SOFTWARE

U135 **600 BUSINESS LETTERS** - Hundreds of laid out letters for every business and personal occasions. Inc, Job applications, complaints, etc.. Files load into any Word processor.
U166 **A-GRAPH V1.0** - Input data for instant graphs, bar charts, pie charts etc.. Data is saved as an IFF file.
U209 **FORMS UNLIMITED V1.04** - Form designer and printing tool. For invoices or similar items.
U242 **LAST WILL AND TESTAMENT** - Write your own will, includes word processor.
U265 **JOURNAL V2.00** - Organise your personal finances like a detailed bank statement. Easy to use.
U273 **ACCOUNT MASTER V2.1** - More complex than Journal and has features that match commercial programmes which offer these facilities. The foremost *Amiga PD* personal accounts program.
U288 **PAY ADVICE ANALYSER V2.0** - Richard Smedley's latest release of this pay slip databse.
U304 **TEXT ENGINE v4.1** - The best PD word processor with inergrated spell checker. Note the up-to-date release version.

GRAPHICS UTILITIES

U1 **ULITMATE ICON DISK** - Edit or draw you own icons. Even import/export graphics from any IFF package. Eg Dpaint or Freepaint. Massive directories of example icons included.
U3 **M-CAD** - Public Domain Computer Aided Design package.
U9 **C-LIGHT** - Ex-commercial Raytracer, now shareware.
U54/55 (2 DISKS) **VIDEO UTILITIES** - 2 packed disks full of video titling programmes covering most aspects of the subject.
U62 **SCENE GENERATOR** - Fractal landscape generator like Vista; but without the heavy price tag.
U102 **AMIGA FOX** - Basic entry level desktop publisher.
U113 **SPECTRA PAINT v3.0** - Good AMOS written IFF paint programme.
U115 **LAND BUILD 3.2** - Another superb fractal landscape generator. Realistic random effects: Mountains, water, clouds, etc....
U142 **FREEPAINT** - The highly regarded PD paint package. The next best alternative if you can't affford Deluxe Paint.
U154 **AUDIO ANIMATION** - Animation and sound programme.
U187 **MOBED2** - Sprite creator/animator. Essential programmers art tool.
U190 **GATORS GRAPHIC GALLERY** - Tutorial with many examples of how to design and draw super logos, like in the demos.
U208 **CYCLOPS** - Plasma picture generator. Weird!
U271 **POLYED V1.0** - Polygon orientated animation programme.
U285 **sMOVIE** - Video titling.
U296 **KIDS PAINT** - Simple, easy and functional art package for youngsters.
U289 **MINI MORPH V1.0** - Super fast morphing programme. The best you can get!
U296 **GRINDER** - Picture file conversion. Can transform most formating, including: GIF, TIFF, HAM-E , TIFF, ATARI, IFF.....

MUSIC TOOLS

U178 **COMPOSER** - Traditional style music composing with staves and notes. Very good. Includes examples.
U186 **MED 3.2** - Music sequencer. V.good.
U183 **PRO TRACKER** - Another professional music sequencer.
U200 **SHADOW SAMPLE MAKER** - Create samples without a sound samler hardware add on.
U260 **ST-88** - Sound samples for use with either U186 or U183.
U261 **ST-89** - More of the same. 85 samples.
U262 **ST-91** - As above. 52 samples.
U263 **ST-92** - As above. 75 more samples.
U264 **ST-93** - As above. only 29 samples this time.

LISTED IN THIS ADVERT IS JUST A SMALL PROPORTION OF THE SOFTWARE WE HAVE AVAILABLE. GET HOLD OF OUR DETAILED CATALOGUE DISKS FOR INFORMATION ON THESE AND MANY MORE SUBJECTS.

GAMES

G77 **TRACK RECORD** - Super fast overhead racing game. Loads of tracks, loads of action.
G75 **BULLRUN** - Wargame based on an historical civil war confrontation.
G68 **INSIDERS CLUB** - Stockmarket game where you can manage a multi-million pound corporation.
G66 **NO MANS LAND** - Good 2 player, one-on-one to the death duel with a variety of weaponary.
G64 **MECHFIGHT** - Role Playing Games where your character is a robot on a huge space craft.
G63 **GROUND ZERO GAMES #5** - Big value game compilation, with games like: Othello, Tiny Baseball, Tron 90, Frog.. 22 in all.
G61 **ZEUS** - Good puzzle game. Based on a commercial Ocean game, Puzznic.
G55 **MASTER OF TOWN** - Anti-social game of property destruction. Smash windows, damage vehicles, break street lamps. But fun. •A500 ONLY•
G52 **BLOCKIT** - Another puzzle game which has been cloned from a commercial game.
G49 **POM POM GUNNER** - Shoot-em-up with digitised graphics. The scenario is Pearl Harbour.
G37 **SEALANCE** - strategy wargame where you command a nuclear submarine. Included animated sequences.
G35 **JAR** - Clone of an old arcade classic - Crystal Castles. A bit like Pacman with 3D platform mazes.
G26 **WELLTRIS** - Tetris game with a twist. Involves a 4 sided well.
G18 **THE GOLDEN FLEECE** - Incredible text adventure with masses of depth. Similar style to the awarding winning Infocom text adventures.
G88 **21 GAMES** - Another mega game compilation with 21 games on a single diskette. Different games to the ones on G63.
G106 **ANTEP RPG** - Role playing game with a very similar style and scenario to earlier Utlima games..
G121 **BIPLANES** - Take to the skies in this one or two player dog fighting game. •A1200 USERS, DISABLE CPU CACHES•
G122 **DUEL** - Plain and simple 3-Dimensional split screen game for two players. Both in tanks, both with big guns. Guess the rest!!
G128 **TOTAL WAR** - Computerised version of the RISK strategy board game.
G129 **SUPERLEAGUE MANAGER** - Footy management game.
G138 **WORLD** - Science fiction text adventure on a strange planet.
G139 **CROAK** - Enhanced clone of Frogger, even a two player competition mode where you complete to get as many froggy's across at the same time.
G141 **AMERICAN FOOTBALL COACH** - Manage a NFL team and call all the plays.
G142 **BATTLEMENTS** - Based on Hunchback from C64.
G150 **LEGEND OF LOTHIAN** - Good role playing game.
G156 **MISSION X**- Shoot-em-up with awesome graphics.
G158 **BRAIN BALL** - Good looking but difficult skill/puzzle game. Worth a shot if you want a tough challenge.
G161 **ASHIDO** - Oriental puzzle game.
G162 **SYSTEM 4** - Game in the same genre as Q-Bert, but with new variations on the pyramid theme. Very professional.
G168 **OTHELLO** - Good board game. Also known as Reversi.
G169 **DONKEY KONG** - Platform game that first introduced Mario many years ago. Still brilliant.
G172 **BATTLE CARS 2** - Super fast 3D vector car battle game around a host of arena's.
G177 **CRAZY SUE II** - Popular platform game.
G180 **WAR** - Could be considered Space Chess.
G182 **TREASURE ISLAND** - Game for kids.
G183 **BOUNCE 'N' BLAST** - Highly praised platform game, almost of a commercial quality.
G193 **HELLZONE** - Space shoot-em-up, similar to R-Type. •A1200 USERS, DISABLE CPU CACHES•
G196 **CAG** - Stands for CREATE ADVENTURE GAMES, make your own text adventures with this easy to use engine.
G200 **FIGHTING WARRIORS** - 1 or 2 player martial arts beat em up with large well animated sprites and special moves. V.Good.
G202 **A NIGHT AT THE TOP** - Atmospheric text adventure which dumps you in at the deep end - 40 stories up.
G205 **TOP OF THE LEAGUE** - Another soccer management game which gives you the opportunity to run your own team and take them and you, to the top of the league.
G206/207 (2 DISKS) **OLEMPIAD** - Sports events with lemmings as the stars.
G210/211 (2 DISKS) **TALISMAN** - Big graphic adventure game. Excellent. •REQUIRES 2 MEGABYTES•
G212 **FRUSTRATION** - Incredible text based adventure, unsurpassed in depth and detail.
G217 **UCHESS** - Chess game that uses the AGA chipset. •REQUIRES 4 MEGABYTES, A1200 ONLY•
G221 **BOW & ARROW** - Archery game.
G224 **OBLIVION** - Super fast defender clone.
G226 **MORIA v5.4** - Big RPG with many dungeons to explore, with lots to do. Even has a town you can explore and visit the shops.
G229 **GIGER TETRIS** - AGA Tetris. •1200 ONLY•
G232 **MONACO** - Clone of an old arcade game. Fast and furious.
G234 **WOT'S IT'S NAME** - Brilliant trivia board game.
G237 **GAMMON** - Good computer version of Backgammon.
G238 **TETREN** - Tetris with lots of added extras. Worth a look.
G241 **IMPERIAL WALKER** - Take control of an X-wing fighter and stop the imperial walkers from reaching the allied HQ.
G245 **ALL ROUNDER** - Cricket simulation like none other.
G246 **WIBBLE WORLD GIDDY** - Possibly the best platform, puzzle game ever produced for the PD market. A must.
G247 **FLEUCH** - C63 Thrust clone. Skillful game.
G249 **PSYCHO SANTA** - A game for Christmas.
G255 **AMOS CRICKET** - Shareware Cricket game. Lots of features
G256 **SHANGHAI '93** - Oriental tiles game.
G257 **DELUXE PACMAN V1.4** - The best Pacman clone around. Even includes power ups.
G262 **BLUE DIAMONDS 4** - Boulderdash clone. Good stuff.

USEFUL UTILITIES

U158 **NOERRORS** - Hides physically damaged tracks on both floppies and hard disks. In effect making useless disks, usuable.
U157 **ARQ 0.99** - Changes the boring old Workbench requester windows into animated ones. Quite neat.
U146 **AMIGA SYSTEMS DISK** - Host of Amiga system diagnostic checkers, and performance testers.
U111 **GOLF SCORE** - Golf tally recorder.
U112 **WORD SQUARE SOLVER** - Finds those hidden words in those word square puzzles.
U167 **BIORHYTHMS** - Plots your personal graph for any month of the year: Physical, Emotional, Intellectual.
U180 **BROWSER II** - Good file transfering programme, and much more.
U191 **TYPING TESTER** - Evaluates your typing speed.
U206 **RACE RATER** - Horse racing, outcome predictor. Works on statistical data you enter.
U215 **FREECOPY** - Removes various proctection schemes from a massive list of commercial games.
U216 **BON APPETIT** - Recipe database.
U267 **SPECTRUM EMULATOR V1.4** - Run old speccy games on your *AMIGA*.
U280 **LEMMINGS II HARD DRIVE INSTALLER** - Put Lemmings 2 on your Hard drive. •REQUIRES 1.5 MEG, NOT A500•
U281 **D-COPY 3.1** - Powerful and professional disk duplication software with a similar performance as X-Copy Pro.
U282 **TERMINUS 2.0** - Rewritten form Jrcomm. The best communications package for users with fast modems.
U283 **LOCKPICK V2** - Removes copy protection from roughly 450 commercial titles.
U290 **CHARACTER GENERATOR** - For Advanced Dungeons & Dragons players.
U291 **RELOKICK v1.4** - New version of this A500+, A600 and A1200 downgrader to Kickstart 1.3. Helps make many A500 only titles work on your machine.
U293 **PARBENCH** - Link up two Amigas, or Amiga to CDTV for communicationg between them or file transfers.
U294 **POOLS TOOLS** - Comprehensic Pools predictor.
U297 **LISTER 2.1** - Disk magazine creator.

DEMOS

D148 **STATE OF THE ART** - By Space Balls. •A1200 USERS, DISABLE CPU CACHES•
D161 **FAIRLIGHT 242** - 29 meg of graphics crammed on a single disk. Stunning routines.
D159 **LETHAL EXIT** - •A1200 ONLY•
D157 **DESTINATION UNKNOWN** - The best AGA vector demo yet! •A1200 ONLY•
M127/128 (2 DISKS) **JESUS ON E'S** - 27 minutes of Rave. •REQUIRES 2 DISK DRIVES•
D160 **TECHNO TRACKS II** - Rave demo from the United States. •1200 ONLY•
S93 **REVELATIONS** - Stunning slideshow.
S94 **NIGEL MANSELL AGA SLIDESHOW** - Nigel in his Formula One days. •A1200 ONLY•
S91 **MANGA** - Japanese cartoon slideshow.
M139 **CLASSIX 2** - Classical music from Bach, Handel and Pachelbel.
A151 **THE LEMMING SHOW** - Starring Suicide man. Not for the squeamish.•REQUIRES 1.5 MEG•
D156 **JETSET** - Funky.
D153 **RETINA** - Flashy demo. •1200 ONLY•
D145 **PIECE OF MIND** - Star Trek spoof.
M134 **RHAPSODY IN BLUE** - Jazz.
M135/136 (2 DISKS) **NUTCRACKER SUITE** - Makes a welcome change.
M130-134 (4 DISKS) **A TO Z OF C64 TUNES** - Hundreds of classic C64 tunes packed onto 4 disks. Great value.
M125 **MUMBO JUMBO** - Very lively.

FINAL FRONTIER ISSUE # 5

We also stock the Final Frontier disk magazine at only £6.50 inc P&P.Four action packed disks full of news, reviews.Everything on Star Trek and The Next Generation. Interviews with the stars and convention news. Loads of features. Plus exclusive artwork from Tobias Richter.

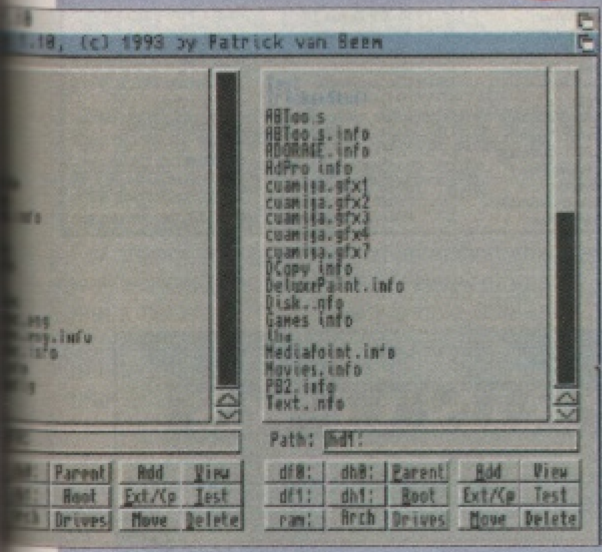
THIS IS NOT PUBLIC DOMAIN, THIS DISK MAGAZINE COMES WITH IT'S OWN PERSONALISED LABELS. AND AUTHORS GET PAID ROYALTIES FOR THEIR WORK.

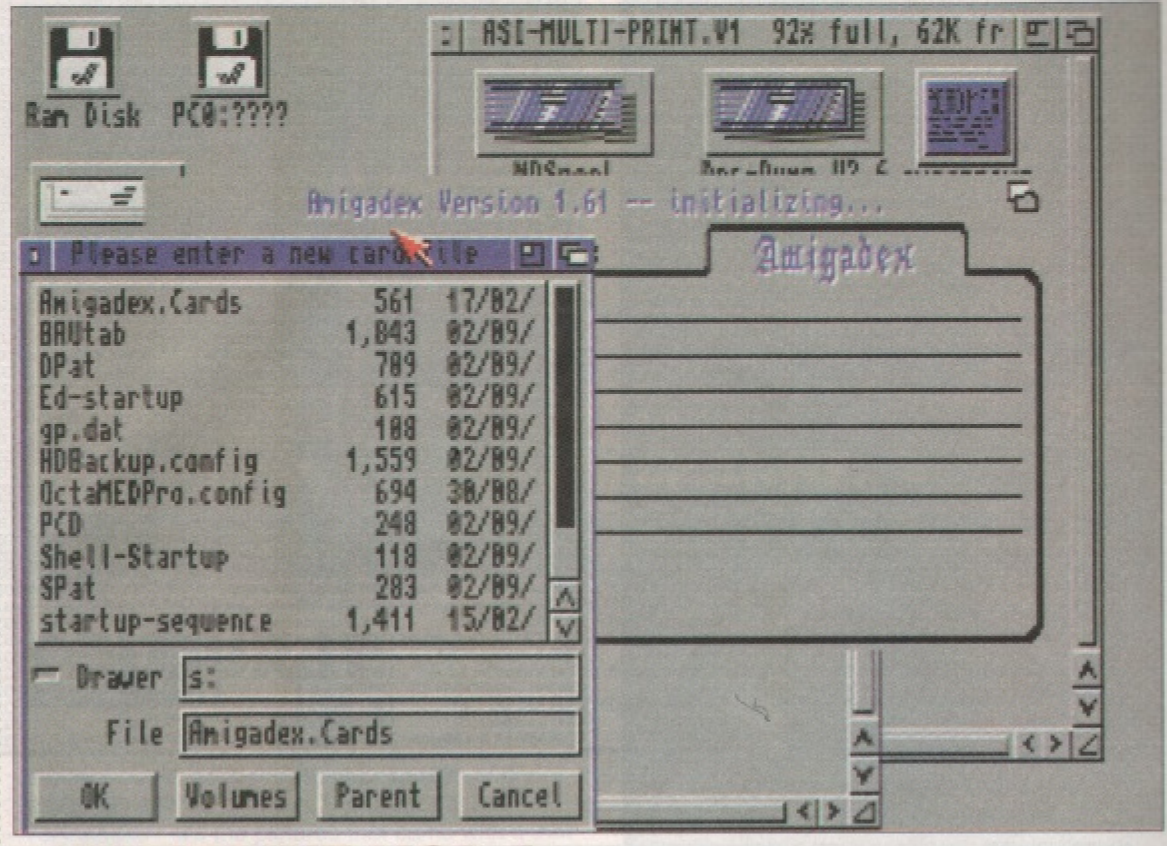
PD UTILITIES

If you're after cheap productivity software rather than games or demos, then Public Utilities is definitely worth checking out. Tony Horgan spots the bargains.

GUI ARC 1.10
point and click archivers

CLI-based archivers like LHA can be a pain to use, so it's a good job there are programs like this to make life easier. *GUI ARC* gets around the problem with a *SID/Directory Opus*-style mouse operated interface. Your source and destination drives or directories each have their own window. Archiving a set of files is just a matter of highlighting them with the mouse, and clicking the appropriate button. Extracting files is just as simple. Highly recommended to regular archivers.
Available from: Computer and Design Services, Dept PD, 24 Blackmoor Croft, Tile Cross, Birmingham, 33 OPE. Tel: 021 779 6368. Price: £1.50 including P+P. 88%



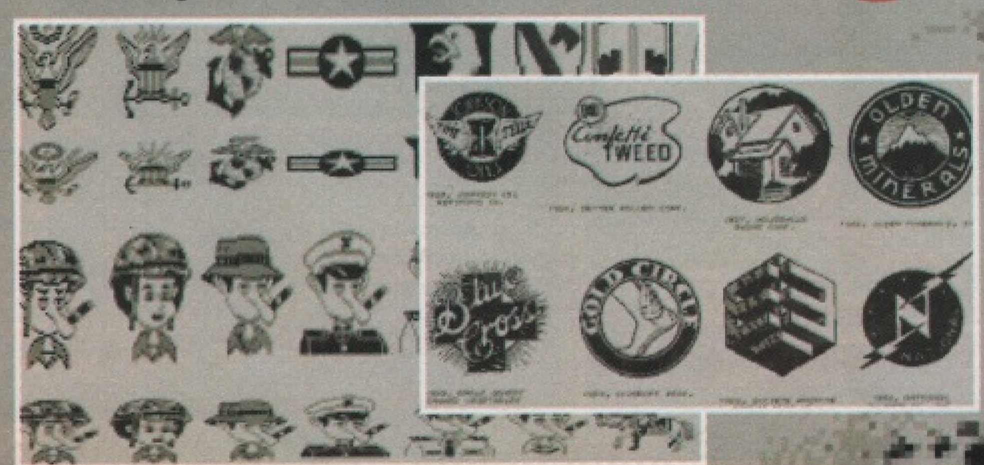


MULTIPRINT VOL 1
printer utilities

Printers eh, don't you just love 'em? If printers are your thing, then you'll doubtless go all gooey at the prospect of this latest Assassins compilation. It's a collection of loads of handy printer utilities covering all manner of things from font management to spooling to envelope printing. Some of the utilities need Workbench 2.04 or higher to run.
Available from: Roberta Smith DTP, 190 Falloden Way, Hampstead Garden Suburb, London, NW11 6JE. Tel: 081 455 1626. Disk no. BU116. Price: £1.40 including P+P. 80%

X36 CLIPART
clip art

Now that scanners and digitisers are more affordable, there's plenty of good clip art doing the PD rounds. This disk has some very useful logos and images that could find their way into all sorts of graphics, video and publishing jobs. As usual the quality is a bit ropey in places, but so long as you're not hoping to use the clips too large, there shouldn't be a problem. The list of clips include: animals, cars, wildlife, computers, banners, flags, logos, flashes, military, and loads of small American-style labels and trademarks. All of the clips are greyscale lo-res images, with lots packed onto each screen. If image quality isn't too important, they're well worth a look.
Available from: Roberta Smith DTP, 190 Falloden Way, Hampstead Garden Suburb, London, NW11 6JE. Tel: 081 455 1626. Disk no. CU301. Price: £1.40 including P+P. 77%





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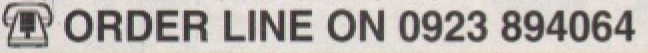
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LSD LEGAL TOOLS 144/145

utility compilations

For anyone who spends a lot of time on the more technical aspects of the Amiga, LSD's regular Legal Tools compilations are a good source of obscure little utilities. Vol 144 has the follow goodies up its sleeve: *Das Modplayer* (a *Soundtracker* module player), *Mungwall* (memory management), *Tar* (backup tool), *Ora* (system time), *Palette Tool 020/030/040* (colour control), *Hired Guns Map Viewer*, *FBL* (faster blitter operation), *LSDPlay* (module player), *MD5Sum* (checksum generator), *Tar Test Pad* (Tar tool), *OSnap* (text snapper), *Stone* (converts pics to stone effect), *AFCopy* (directory utility), and *DMACon* (FBL tool).

Volume 145 tops that lot with *ASCII EOL2* (an *ASCII* convertor), *Disksalv* (disk salvager), *DUp 0.46* (disk upgrader), *Turbo Disk* (speeds up disk drives), *DED* (disk editor), *Bootman* (Boot manager), *Multi-Ripper 3.0* (music module ripper) *Astro* (comms package), *DMon* (monitor), *RipGraf* (graphics ripper), *CDRom* (CD-ROM controller), *Select* (startup halt), *Bootman Prefs* (boot prefs), *Check Ret* (program return code). Volumes 144 and 145 are each contained on a separate disk.

Available from: Visage Computers, 18 Station Road, Ilkeston, Derbyshire, DE7 5LD. Tel: 0602 444501. Disk no. LSD 144/LSD 145. Price: £1.50 each plus 50p P+P.

80%

CYNOSTIC UTILITY COLLECTION 5

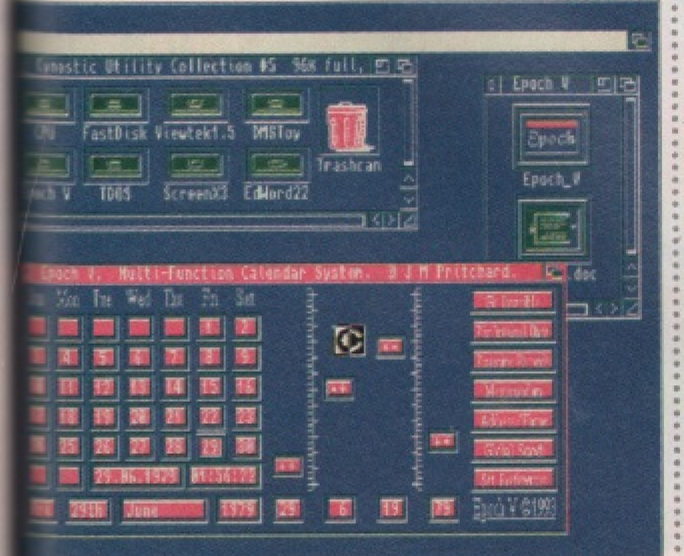
various utilities

For anyone into graphics and animation, this disk is well worth getting just for the *Viewtek* program that's included. This is a very simple, intelligent picture and animation viewer that's bound to come in handy all the time. The front end is nothing more than a file requester – but what a file requester it is! The program automatically detects whether the selected file is an animation, an ILBM, a GIF or JPEG, and configures itself accordingly. It supports the AGA modes, and also has an ANIM7 animation convertor (put them through this and they'll playback a lot faster).

Also on the disk is the text editor *EdWord*, the DMS file interrogation tool *DMS Toy*, and *TrackmoDos* for putting together music demos. Another handy compilation from Cynostic.

Available from: Cynostic PD, Office O1, New Enterprise Centre, Little Heath Industrial Estate, Old Church Road, Coventry, CV6 7NB. Disk no. U0235. Price: £2 including P+P.

85%



COLOUR IT

kids paint

These kiddie paint packages are all the rage at the moment. *Colour It* is the latest to appear, and comes as a three-disk set. The program itself is very simple – it's the pictures that come with it that make it worthwhile. There aren't any of the normal drawing tools available, except for a flood fill function. This is all you need to use *Colour It*. Load up one of the pictures from the disk, and you can then colour it in by clicking in the blank areas with the mouse. The right button brings up the palette when you want to use a different colour.

All of the pictures are black and white outlines, scanned in from books and comics no doubt, so they're perfect for colouring in. Each disk has around 20 pictures each, and you can load and run any one of the three independently of the other two. Well, it kept me happy for a few minutes anyway.

Available from: Computer and Design Services, Dept PD, 24 Blackmoor Croft, Tile Cross, Birmingham, 33 OPE. Tel: 021 779 6368. Price: £1.00 each plus 50p P+P.

74%



DISK MAGAZINES

Everyone's getting in on the disk mag thing these days. Here's a quick roundup of what's currently available.

TOTAL IRRELEVANCE

This is the official *OctaMED* user's disk mag. The interface has been written by Teijo Kinnunen (the author of *OctaMED*), and is very neat and simple to use. Tutorials abound as you'd expect (the November issue includes a guide to sampling rates by Dave Sullivan and a MIDI for Beginners feature among others), and there are also a few *OctaMED* tunes in there too. Software and music reviews also jostle for prominence among more general articles. If you're into *OctaMED* in a big way, there's plenty to keep you happy here.

Available from: Computer and Design Services, Dept PD, 24 Blackmoor Croft, Tile Cross, Birmingham, 33 OPE. Tel: 021 779 6368. Price: £2.50 including P+P (2 disks).

80%

CHANNEL Z

The only AGA-specific disk mag to have appeared isn't the most attractively presented, but at least it is all geared towards the A1200 (with A4000 relevance too of course). This is a more varied disk mag than most, with a bit more to offer than reams of text. Issue 2 has a cute digitised raccoon picture, the even cuter Workbench hack called *Ameko* (gives your Workbench a pet cat), *Virus Checker*, *Kill AGA*, *DCopy 3.1*, a letters page, PD reviews, a handful of features and a general reviews section. Not bad at all.



Available from: Magnetic Fields, PO Box 118, Preston, Lancashire, PR2 2AW. Tel: 0772 881190. Price: £1.00 including P+P.

79%

GRAPEVINE

Probably the longest standing diskmag of them all, Grapevine is very much a 'scene' mag. That's 'scene' as in the hacking/demo scene, so if you're into putting record-breaking numbers of bobs on screen and then zooming them with a 50Hz 3D routine, this is the mag for you. Until recently it's been out on its own, but there are now a few serious challengers for its crown. Even if you don't care about coding, there are always hundreds (yes hundreds) of other features that have nothing to do with the Amiga at all.

Available from: Visage Computers, 18 Station Road, Ilkeston, Derbyshire, DE7 5LD. Tel: 0602 444501. Price: £3.50 including P+P.

85%



ART GALLERY

Rachael Whiteread eat your heart out. Here's the latest selection of art on the Amiga sent in by our readers.



SPIDERMAN

by **Gijbels Gert** of Limburg, Belgium.

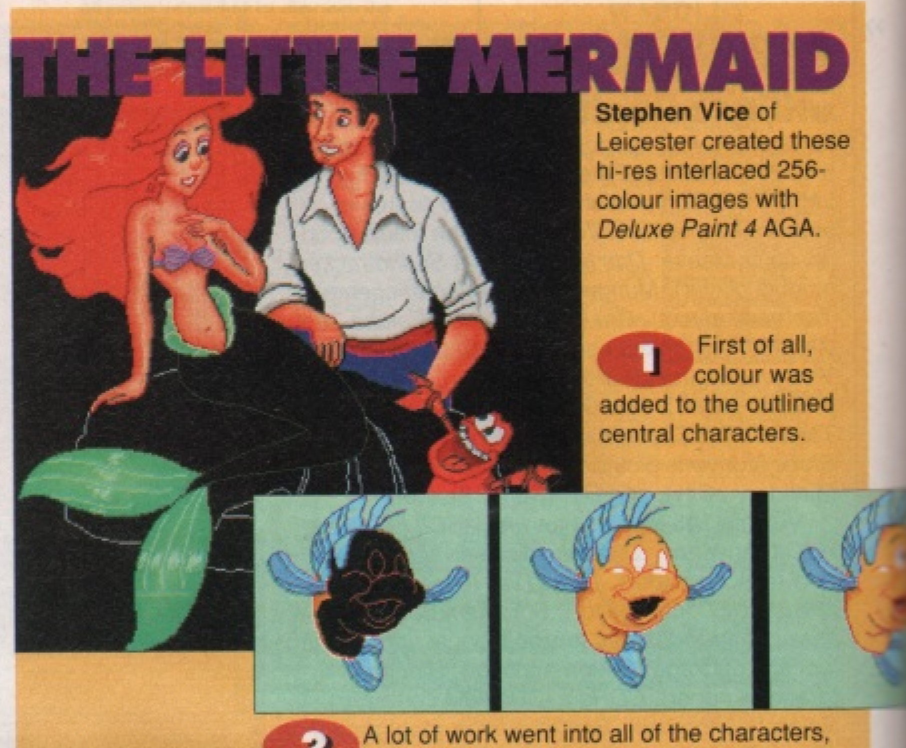


FERRARIS

Dez Hoyle's Ferrari pictures are based upon photos from various Ferrari literature.

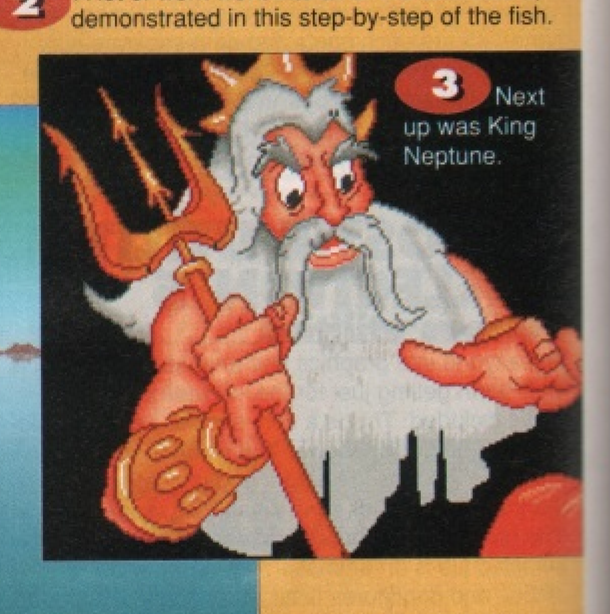
THE LITTLE MERMAID

Stephen Vice of Leicester created these hi-res interlaced 256-colour images with *Deluxe Paint 4* AGA.



1 First of all, colour was added to the outlined central characters.

2 A lot of work went into all of the characters, demonstrated in this step-by-step of the fish.



3 Next up was King Neptune.

4 The smooth background shading is thanks to the 256 colours coupled with the high resolution.



5 Finally all the elements are pasted together.

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COMPARISON CHART

FEATURES/MODEL	GVP HD8+	ICD TRIFECTA LX	COMMODORE A590 20Mb	EVESHAM REFERENCE 100
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GVP DESIGNER STYLING	✔	-	-	-
RAM EXPANSION(MAX)	8Mb	8Mb	2Mb	4Mb
MINI SLOT (FOR FUTURE EXPANSION)	✔	✔	-	-
SCSI INTERFACE	✔	✔	✔	✔
GVP PERFORMANCE Faaast ROM	✔	-	-	-
DEDICATED POWER SUPPLY	✔	✔	✔	-
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* Figures taken from *Amiga Computing*, October 1993

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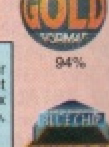
FASTER THAN AN A1200 or A4000 030

An A500 with the GVP A530 fitted will be considerably faster than either the A1200 or A4000. This is possible because the A530 uses a 40MHz 68030EC processor, whilst the A1200 uses the slower 14.19MHz 68020EC processor and the A4000-030 uses the 25MHz 68030EC processor.

Features include:

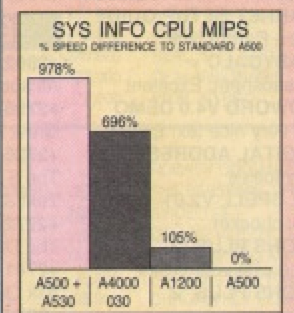
- 40MHz 68030EC Processor (the A1200 has a slower 14MHz 68020EC processor)
- Up to 8Mb of 32-bit Memory, 1Mb of 32-bit Fitted
- PLUS Same Features as HD8+
  - Mini-slot for Future Expansions, see PC Emulator - far left
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94%

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AMIGA Workshop



ISSUE 13 JANUARY

The Amiga really is a versatile computer you know. Honest it is! And to prove it here's a whole 32 pages dedicated to things you can do with it apart from playing games. We've got step-by-step guides, tutorials and walk throughs to some of the most impressive Amiga programs available today. Our team of experts is on hand to help you get the most from your Amiga.

DPAINT TUTORIAL

QUESTION & ANSWER MASTERCLASS

PART 12

For his final instalment in the year-long CU AMIGA project to help you become a pro with *Deluxe Paint*, Peter Lee does his Claire Rayner bit to answer some of the questions which have beset Amiga artists since time began... Well, since the start of the year anyway, luvvies.

Q My animations aren't very long, but I keep getting messages from *DPaint* like 'insufficient memory'. What's the cause (I have a 1Mb A500 plus), and how can I solve it?

Robyn Broderick, Dublin.

A The glib solution is to throw money at the problem. If you can afford it, buy some extension RAM, which *DPaint* can use to store many more animation frames. The RAM will be useful for other applications too, so it would be a wise investment. The other solutions involve making the most of what you've got.

Here's a run-down of the things you should consider to free up more RAM for *DPaint*: Close down the Workbench screen if it's open. You do this by selecting the Workbench option from the preferences menu. Free any large brushes you may be holding in memory unawares – to do this simply clip out a tiny brush and the old one is replaced. If you have a spare page, remove it since it takes up around 40k of precious RAM in low-resolution mode. Delete it by accessing the 'delete this page' option from the picture menu whilst in the spare page. Plan your animation beforehand, and stick to the number of frames you can complete it in. If memory is tight, never select the expanded way of storing frames from the method menu item. By sticking with 'compressed' you will be able to cram in more frames because *DPaint* stores only the differences between successive frames in this format. You should also avoid using stencils, which use memory, steer clear of pattern fills held in memory, and, once used, free any Anim brushes, which are held in memory too. This may sound restricting, but you have to maximise what you have. You can still use an Anim brush, of course – but remember to 'free' it after use. Likewise fill patterns and spare pages – a little pre-planning could be the only answer you need. Finally, you can free up more memory right from the start of *DPaint*, by specifying Swap in the startup requester. This allows *DPaint* to load in, and then free sections of code as and when needed. If you accept the default (All) then the entire program loads into memory – which is quick, but memory intensive.

Q My animations play too slowly – they're really just not smooth enough. How can I give them some pace?

Geraldine Broderick, North Hants.

A Another memory-shifting problem. The more complex your images, the harder your Amiga has to work to re-draw the animation frames. The same rules apply as with lack of memory. Use objects with less detail – remember, once a brush is spinning or moving, there's not a lot of point having it full of subtle effects because these will be lost in the motion. Keep backgrounds simple if possible – use solid colours instead of gradient fills. If you have enough memory for your work, try using the method/expanded menu option, which stores each animation frame as a separate screen (around 40K each in low res); this will lead to a much smoother playback because *DPaint* won't have to uncompress the image data before displaying each screen. Be warned, though, that the animation can take up vast amounts of disk space in this format.

Q I own *DeluxePaint III*, and want to upgrade to version IV. Will all my old stuff work on the new version? I fancy all the effects you get with HAM painting, but don't want to re-do all that work!

Dermot Dennis, Manchester.

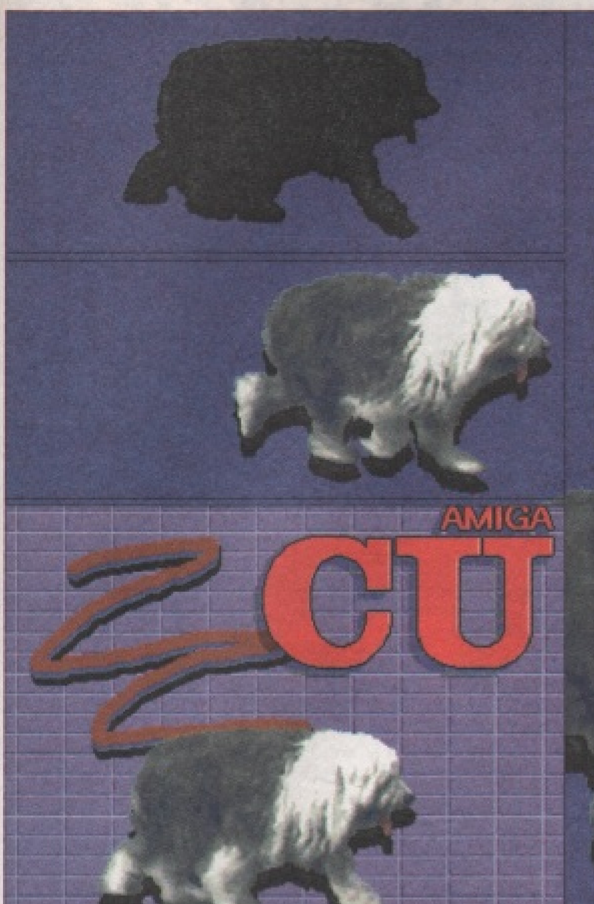
A The changes between the two programs are quite significant, but rest assured your images and animations will all load into *DPaint IV*. The changes which tend to confuse most upgraders are ranges and palettes. *DPIV* offers wider choices in these areas at the expense of complexity. As far as HAM painting goes, you're in for a treat, because you can load all your old images into HAM, and *DPaint* will convert them to the 4096 colour mode, so you will be able to achieve effects on your saved work which you never even thought were possible.

Q I'm confused over when to use background fix and when to create a stencil. Is there any difference between the two, and, if so, what's the best way to use them ?

John Hoyne, Shrewsbury.

A Both background fix and stencil protect colours. But while you can protect selected colours from your palette in stencil creation, the background fix protects *all* screen colours. In stencil work you often find you need to add colours around an existing image – usually you may try to paint in a background after the foreground has been finished. By protecting all colours except the background, you can freely edit the screen, secure in the knowledge that you won't be painting over anything that's already there. Stencilling is a great safeguard, and allows you to work intuitively with





HAM IT UP

Using digitised pictures can really bring your work to life – in a fraction of the time you would have to spend drawing. Images on the Amiga abound, but are usually the best in HAM mode, which isn't really the best mode for slick animation work. If you have *DPaint IV* you can load in a HAM picture, then see how well it converts to 32-colour mode by changing the screen format from the picture menu. Or why not use the brilliant *Art Department* program which we gave away *free* on our May 93 issue? Once you've loaded in a digitised image, you don't have to keep it as it is – use it to *your* best advantage. Take this chopper, for example – a wonderful HAM image which I cut out and kept. It's very nice, but perhaps a tad boring for an animation. How about some movement? And what better to move than the rotors? After erasing the background, I cut out the blades from the helicopter, and over 20 frames made them revolve in the Y angle. I copied the rotor-less chopper to the animation under the blades, then picked up the whole lot as an Anim brush. But there's more. I made the helicopter fly into the distance by setting values of X=-(minus)[illegible] and Z=200 in the move requester, after I [illegible]ped the Anim brush down in the bottom right of [illegible] screen. This had the effect of moving the Anim brush [illegible] and to the left while getting [illegible] as it went (thanks to the Z value). To give some foreground interest I had the original-sized Anim brush hover [illegible] left, adding this after the moving [illegible] text an[illegible] by stencilling every colour except the light blue background.

painting instead of being restricted by what images go behind what. The main use of background fixing is experimentation – you can draw to your heart's content without really altering a pixel on the fixed screen. This also means you cannot edit the fixed image in this mode, so, at some point, you will need to free the background to get on with the job in hand. Anything you added while it was fixed now becomes part of it. So, while you can't change what's fixed by painting over the image and adding edits, you can significantly alter what's on screen. And, if you make a mistake, just erase it, and the original fixed screen shows through. This technique is excellent for cell animation, where you need to see what's gone before in order to make changes to the next frame. *DPIV* has its light table effect for this, but *DPIII* users have found background fixing serves the purpose.

Q I want an object to disappear into the background during an animation, but no matter how small I make the distance, there's always something left on screen. How come?

Gerry Rooney, Glasgow.

A It's always seemed strange to me too. You can minimise an ordinary brush manually (minus key) until it's disappeared, but the 'animation move' facility isn't as bright. The only automatic way I know of doing this trick is to turn your brush edge on by rotating it using the X angle option for the last frame. But you, like me, may find it a lot easier just to erase the sucker after it has painted on the last screen.

Q I'm quite happy running *DPaint III*, but it's annoying to find that just when you want to tint something, the mode menu option isn't available – am I doing something wrong ?

A A lot of people find this unnerving. They cut out a shape, and want to tint something with it. Unfortunately, *DPaint III* doesn't allow custom brushes to be used for tinting – you can only use the built-in brushes and tools. The way around this, if you need a specific shape to be tinted (maybe a shadow of a person or building), is to use the freehand fill option with tint enabled from the fill requester, and draw your outline. For built-in brush tinting, select the mode\tint menu item. Lucky *DPaintIV* users can activate effect\process\tint and place a custom brush on screen to achieve the same effect.
NOTE:Tinting is dependent on your current palette. If there aren't any suitable colours available (ie ranges of various colours), *DPaint*'s brilliant, but it can't work miracles.

Q I notice you and lots of other Amiga artists make use of real pictures in your work. How easy is it to do this myself, and what problems am I likely to face using them in my own images?

Paul McEvoy, Norway.

A By real pictures I guess you mean digitised images. The Amiga is such a wonderful computer for storing and displaying beautiful images that there's little wonder they are used so widely. Over the past few months I've used striking real-life pictures to illustrate points in an entertaining and memorable way (I hope!). Some I've digitised myself; others I've downloaded from bulletin boards; and yet others have come from PD library disks. Let's quickly run through your options. To begin with I'd advise getting suitable pictures from either shareware or public domain sources. There are many of these outlets around, and the disks sell cheaply because what's on there has been either donated by the author to the Amiga community (public domain), or offered on a trial basis to see if you want to buy it (shareware). I've let loose some of my artwork into the world and, as far as I'm concerned, people can do what they like with it.

Capturing your own images onto the computer is more complicated, requiring you to buy a digitiser. Once you've connected on to your machine, you then need either a video recorder or video camera from which to grab (or capture) the image. The digitising software is very clever and, depending on your cash outlay, you can buy colour or greyscale digitisers. Some digitisers can actually grab moving images (to be used in animations) while others require a few seconds exposure to digitise an image (which means if you're using a video recorder, it had better have a rock-steady pause function). Problems? With *DPaint* not many, because whatever mode the digitiser grabs the screen in, you can almost bet that *DPaint* will be able to load it in for you to edit. Also, be careful not to infringe copyright. Just because you digitised a picture into your computer doesn't mean it's yours!

Q My *DPaintIV* disk came with something called coloured fonts, but they look funny when I try to use them. Is my computer display to blame? (I'm plugged into a portable TV until I can afford a proper monitor.)

George Elias Chousboury, Paris.

A No, you've just missed out a vital stage in accessing the fonts. To ensure *DPaint* can use the colour information in the font, you must first of all run a little program called *ColorText*, which you'll »



DANCING IN THE SHADOWS

Simple shadows can be effective, and they're easy to do. Using a 'Real Things' Anim brush of a Dulux-type dog, I've painted her as a shadow on a series of animation frames consisting of just a blue background. You can do this in a number of ways – Anim painting on the spot, or by using the move requester with no values entered in any of the movement boxes. Either way, you need the same number of animation frames as there are cells in the Anim brush (in this case, 12). To get the colourful brush to paint black, you again have a choice – either select Colour from the Mode menu (F2 key) or, if you're Anim painting, use the right mouse button as you paint with black selected as your background colour. Either way, the Anim brush will cycle through its cells in silhouette. Next, pick up the animated shape as a new Anim brush with blue as your background colour (you did save your original Anim brush, didn't you?). You now have a moving shadow, and you can load in your background, copy it to all frames, then move your shadow through the frames of the animation. To complete the effect, all that's needed is to load in your original Anim brush, and with a position slightly offset from the shadow, paint it down in the animation in exactly the same way as you did the first.

Remember, if you're using the Move requester, keep the movement values identical for both brushes, but create a new starting position for your actual Anim brush by stamping its starting position offset from the shadow. Then undo this action, which will remove the unwanted image, but allow *DPaint* to remember the place to start the animation painting.

Remember too to ensure your Anim brushes start at the same cell! (Keyboard 7 and 8 move backwards and forwards through your Anim brush.)

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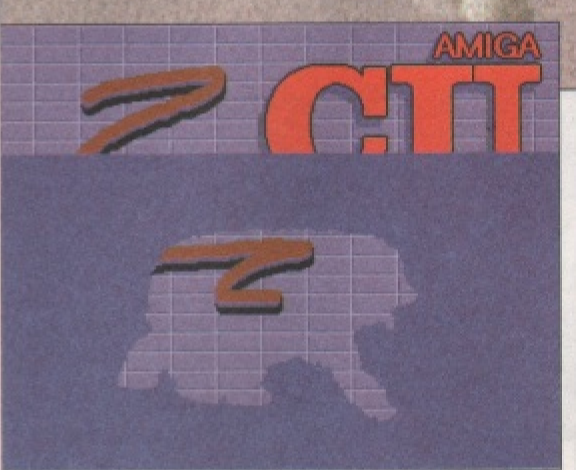
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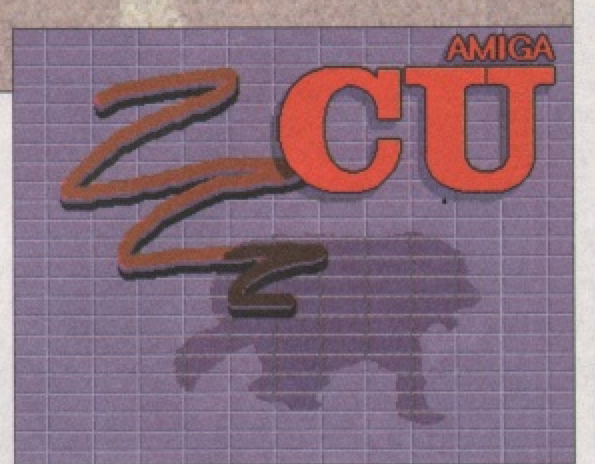
Marcam Ltd, 62 Tenter Road, Moulton Park,
Northampton NN3 1AX
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SPOOKY SHADOWS

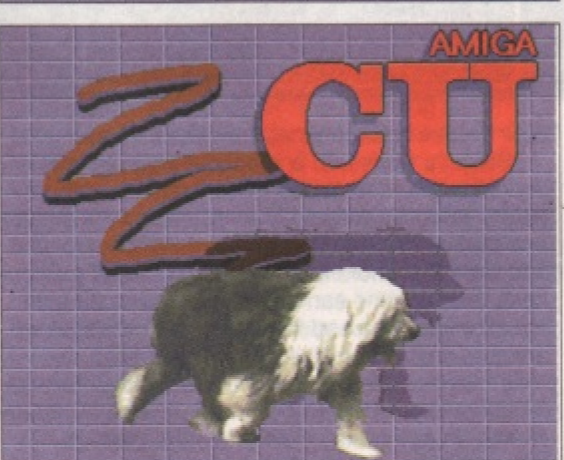
If it's realism you're after, then you are going to have to work at it. This is one of the best ways of creating realistic shadows over any type of background. It needs the 64-colour Halfbrite mode, but can be done in 32-colour mode if you tint the areas of shadow instead of Halfbrite colouring them. Here's how: as we did in the simple shadow method, stamp down your Anim brush as a silhouette onto a blue background over however many frames your animation lasts. You can move your Anim brush any way you like – it doesn't have to be stationary. Next, with the colour of your silhouette selected as the background colour (usually black), cut out an Anim brush which will include all areas of the screen the silhouette has moved to. You will now have a brush which is solid blue, with a see-through hole in the shape of your Anim brush. Load in the animation you intend moving the object 's'and shadow across (it can be either a still frame, or even something already animated).

Now paint down your Anim brush in its final position (either manually or using the move requester). Remember that the blue solid part of the brush doesn't have to cover all the background picture, as we're simply interested in the moving portion. With Hbrite selected in the fill requester, use the filled rectangle tool to manually shade in all moving parts of the Anim brush (where the background peeps through your Anim brush). Pick the moving area up as another Anim brush, with the Halfbrite blue of your background selected as the background colour. Your new Anim brush now contains just the Halfbrite moving shadow of your original Anim brush. So paint it down on your original animation, add the original full-colour Anim brush at a suitable place, and believe dreams can come true...









» find on the *DPIV* program disk. Once that's done, and *DPaint* is started, you can see those typestyles in all their glory when you load them in, and choose to use the fonts palette. Incidentally, you may get a problem because the colours used in the fonts aren't the same as your current palette. The only answer is to type your text using its *own* colour scheme, save that text as a brush, and load it into your main image. Now try to re-map the brush colours to the screen palette.

Q Your reviewer Mat Broomfield was really impressed with *Brilliance*, the new Amiga art package. Is this the end for *Deluxe Paint*?

Jason Shiels, Clapham.

A *DPaint* isn't immortal, just very good. Electronic Arts, who make the program, have supported the Amiga from the beginning and the fact that *DPaint* is the market leader shows how highly people rate it. It's number one because it does what you need an art package to do, and because it's become a standard of excellence. As far as *Brilliance* is concerned, it covers a vast spectrum of drawing needs, and very cleverly too. It's too soon to say if *Brilliance* will topple *DPaint*. Unfortunately, with something like art packages, you can't do exactly what you want sometimes, and have to make do with what you can get from the software.

My first impressions of *Brilliance* is that it pushes this barrier further forward than *DPaint*. Animation control is more far-reaching, and the initially bemusing menu hierarchy quickly becomes second nature.

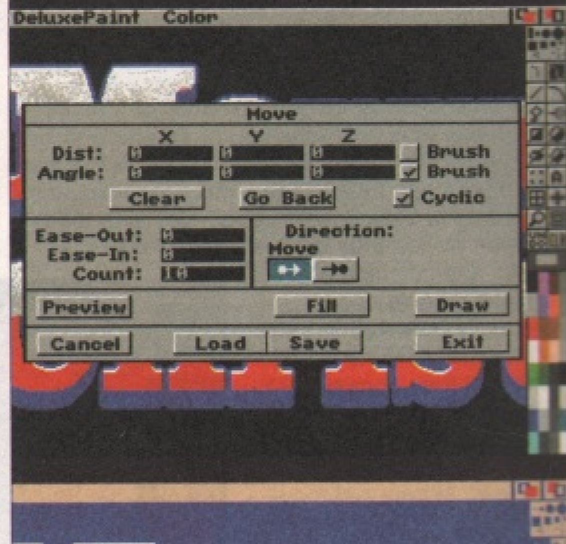
For an even more indepth assessment of each program's merits, see our comprehensive head-to-head feature elsewhere in this issue. CU

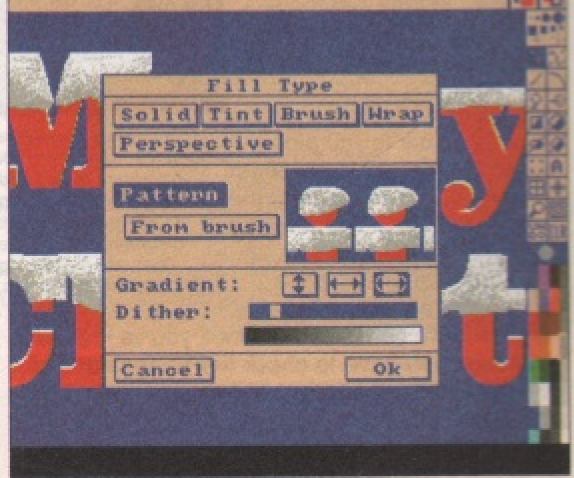
Finally.... That's the end of our 12-month journey through the world of Deluxe Paint. I hope you've been able to pick up some useful tips on the way; and, more importantly, perhaps just a little of my enthusiasm for this great program has rubbed off on you. Watch out for a new tutorial starting soon.



BRILLIANCE V DPAINT

Whenever a new, powerful art program comes on the scene, it gives owners of *DPaint* the willies. So far, *DPaint* has managed to shrug off the competition – it's become so entrenched in the Amiga psyche that life wouldn't be the same without it. But what of *Brilliance*? Is this new upstart about to take the crown as king of Amiga art? If I were a gambling man (which I am), I'd lay evens that people already used to *DPaint* will stick with it, and odds-on that newcomers wanting the cutting edge of graphics will opt for *Brilliance*. What will they find? A massive, comprehensive and beautifully-crafted art program. Even someone in love with *DPaint* like me can see that. Check out the screenshots to see how graphic control has evolved since *DPaint*. The *Brilliance* requesters have everything in there but the kitchen sink, while *DPaint* opts for frugality and simplicity. *DeluxePaint* is looking a tad tired, even at version IV. Trouble is, anyone using Amiga graphics for serious work is going to take a long hard look at *Brilliance*, because even from my initial hands-on test, I can see it will be an exciting and powerfully-creative tool.





AEGIS ANIMATOR

As a follow-up to last month's terrific cover disk program, *Aegis Animator*, Peter Lee explains more techniques to help you get the most out of this amazing piece of animation software.





Still on tween one. The clothes, having being shaped to the figure, are now moved off the subject into what will become their starting position. Once in place, we can move on to tween two.

Tween one: After loading in the image, clothes were added using the polygon tool. Here the loop tool is being used to adjust the left side of the jacket to give it a perfect fit. The outline helps you see exactly what's under the polygon. The tween speed is set to the fastest possible.

This is half way through the animation, which takes place in tween two. Each item of clothing is selected and assigned a path, moving up to its correct position. Final adjustments are made using the move function.

Hopefully, you've been dabbling with *Animator* over the last few weeks, and getting to know how to tend your tweens and manage your morphs. Last month's introduction gave an overview of how the program works; now it's time to progress with some hands-on expert techniques to really make *Animator* earn its keep...

TIMING

The timing of tweens (the individual segments which make up an animation) gives you wonderful control over every aspect of a sequence. We'll run through an example to show how timing can speed up or slow down events – or make them happen so fast they don't exist anymore!

An eye-catching effect is to have objects appear gradually from nothingness – they are invisible to begin with, but they appear gradually as their colours move from dim to bright, emerging from nowhere. You control just how fast they emerge by using the time control panel, which, as well as letting you choose the speed of the entire animation, also lets you pick a speed for the particular tween (or event) you have just created.

TIP: This effect works on bitmap images (i.e. those drawn in *Deluxe Paint*) but is slightly more complicated. Once you've loaded in an image you have to check the RGB values of the colours used and make a note of them, so that when you black them out and ease them back in again during an animation, you can set their values back to what they should be.

But let's work with a simple bitmap (*DPaint* image) outlined text. You need to have words or letters coloured differently so you can work on just one portion of the image at a time. Of course, if you want the whole text to appear gradually as one item, then use the same colour for the outline. In my example I've used four colours for the outline, and just one for the fill colour.

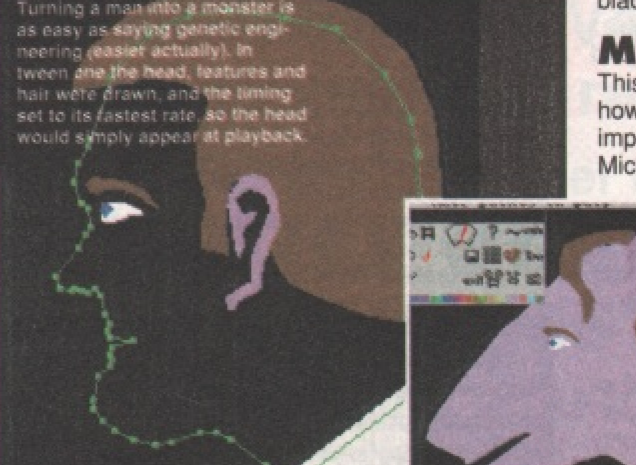
In tween one I loaded in the *DPaint* picture as a background. Remember that for *Aegis Animator* to 'see' images, they must have the correct extension: i.e. .win for brushes, and .pic for pictures. The picture in tween one was loaded in using its own palette, which meant you could see the text, but, as the point of this example is to have the words appear from nowhere, this has to be changed.

Clicking on the colour palette icon on the fast menu brings up the colour control panel, and you can select a colour by clicking on it in the palette at the bottom of the requester. When you select the colours used in your image, then set them to black (RGB values to 00), the text disappears. If you were to play this tween now you'd still see the original image before it blacked out. The secret is to make the tween happen so fast that it becomes invisible. To do this, go back to the fast menu and select time. The requester shows two slider bars; one represents the timer for the whole animation (global), and one just for the current tween (local). By clicking on the tween marker and sliding it all the way to the right, you effectively make your tween happen instantaneously – the image you loaded and blacked out never gets a chance to be shown, and the screen remains 'empty'.

Once done, you can click on the next tween icon (The camera – NOT the movie projector, which replays the animation/tween). It's now up to you so choose how long you want to give the image to appear. By using the colour requester again you can make individual colours fade in (or out) by altering either their RGB or hue, saturation or light values.

To make something appear suddenly (like a flash of white light), set the colour you need for the object then, from the fast menu, select the next tween. To make the colour appear gradually, say over a range of six dim greys before becoming white, you need to alter the colour gradually then click on next tween.

Each change in colour needs its own tween, and remember you can make this happen at your own speed by altering the local speed from the time requester. To make a flash (as in the case of our example, with the solid colour inside the text outline) you simply have the colour switch from black to white in a short tween, then turn it back to black in the following tween.



Turning a man into a monster is as easy as saying genetic engineering (easier actually). In tween one the head, features and hair were drawn, and the timing set to its fastest rate, so the head would simply appear at playback.

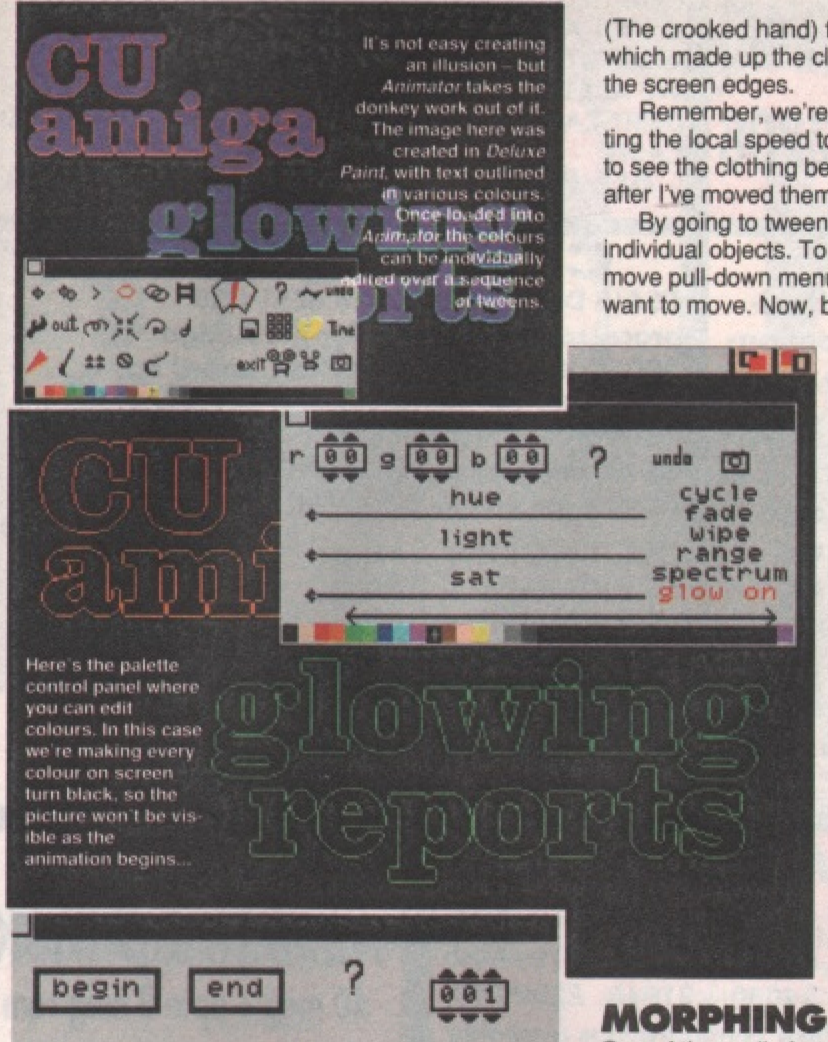
In tween two the face is morphed using the hook function to add and delete new morphing points, stretching out the head and altering the hair into something resembling an ass.

***Left:* After *Animator* works out the animation, the guy looks like this. All this in only two tweens.**

MIXING IT

This rather Monty Python-esque example shows how to use tween one to set up an otherwise impossible animation. I used the famous Michelangelo image of Adam and decided to give him some clothes. But I wanted the clothing to appear and cover him, which raised the problem of getting the clothing the right shape to fit. The answer was to use the filled polygon tool (The little wedge triangle in the fast menu) and draw his suit and shirt in tween one.

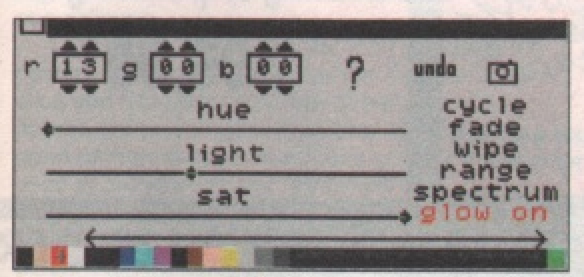
Then I used the move function



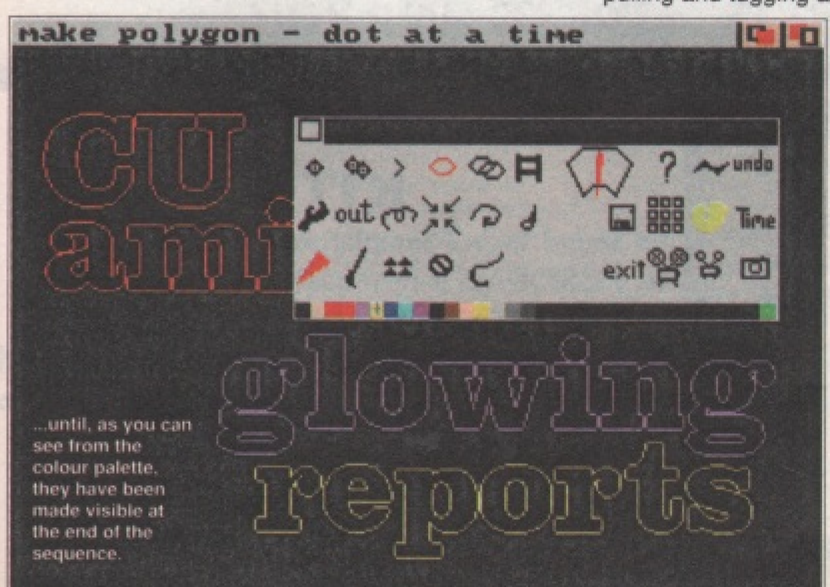
It's not easy creating an illusion – but *Animator* takes the donkey work out of it. The image here was created in *Deluxe Paint*, with text outlined in various colours. Once loaded into *Animator* the colours can be individually edited over a sequence of tweens.

Here's the palette control panel where you can edit colours. In this case we're making every colour on screen turn black, so the picture won't be visible as the animation begins...

...and just to prove it, here's nothing! What is important is the time requester, where you can specify the duration of a tween, or alter the speed of the whole animation. As the first tween needs to be unnoticeable, notice that the local speed slider has been pushed all the way to the right of it's bar, making the original screen appear black right from the word go.



On a tween by tween basis, the different colours of the text are brought into view slowly...



...until, as you can see from the colour palette, they have been made visible at the end of the sequence.

(The crooked hand) to place the various polygons which made up the clothing at various points around the screen edges.

Remember, we're still in tween one, so by setting the local speed to its highest value no-one gets to see the clothing being drawn, only their location after I've moved them.

By going to tween two now, I set paths for the individual objects. To do this, select path from the move pull-down menu, and click on the object you want to move. Now, by clicking as you draw a ghosted line, you specify the route of the object. This works just as well for bitmaps as for *Animator* polygons. If the ending location is slightly out of position, just use the move hand to place it perfectly. You can have all objects move at once during a single tween, or move them over several tweens.

TIP: The path function is excellent for moving bitmaps about the screen, but... I could have used painted images of the clothes in this animation (drawn them in *DPaint* over the Adam image), but with *Animator* you have to always be careful of using up too much memory. A Polygon object takes up much less memory than a bitmap image brush.

MORPHING

One of the really fascinating things about the program is its ability to morph objects – change them from one thing to another. Pre-planning a sequence, though, is vital, because *Animator* won't let you send objects behind others, or bring them forward. You have to visualise each object as drawn on a layer. If something's behind an object before you morph, then it still will be afterwards.

Our little morphing example shows a man being made an ass of. The sequence involved drawing the face using the filled polygon tool, and editing it by using the loop tool (looks like a loop on a handle in the fast menu). The eye (white polygon, blue circle) was added, and the eyebrow and ear drawn with the polygon tool. The hair was then added in the same way – and the first tween was completed, with the local speed set at the highest value to make the face appear as one.

Instead of using the loop tool to stretch out the face into the shape of an ass, I chose the hook tool. When morphing they do the same job of pulling and tugging at a shape, but the hook also allows you to place or remove points from the polygon. To create a new point, just click on a line joining two points together. To remove one, drag it over an adjacent point. This way you get much more control over a polygon, and can adjust the number of points for the best appearance.

I did the same for the hair, turning it into a mane and adding a quiff as a new polygon. As for the ear, this was moved upwards using the hand, then morphed using the hook. All these effects were done in tween two, so when played back, the transformation happens in one go, with the local speed set at a moderate level so you can actually see the face stretching (like the great effect in the film *The Howling*).

SHADOW BOXING

This effect is pretty tortuous in something like *DPaint*, but *Animator* strolls it. It's giving an object (in our case, text) a lengthening shadow to simulate a lowering light source.

The original picture was drawn in *DPaint*, using false colours. You can see that the main text has been overpainted six times with different shades of colour building up to the actual text. We shall be making all those colours invisible to start with by using *Aegis Animator*'s colour control panel. In fact, we have to make the entire image 'invisible' by turning all colours to the values of the background grey (R10,G10,B10). That is done in tween one, which – yes you've guessed it – has local speed set to the highest setting.

Now, on a tween by tween basis, the text itself is brought to view by editing its colour, then in turn the underlying shadows are made visible; on this occasion I used black to demonstrate the technique, but subtle shades of grey actually look better. Start with the shadow nearest the letter, and as you move on to the next tween, select the next colour.

TIP: When in the palette control panel you can click on screen to select a colour. This way you won't be guessing which colour in the range you should be working with.

If you do have to try hit-and-miss selection, remember, too, that you can undo an operation if you pick the wrong colour. The rest of the text was brought into view in a similar way, and gives a pretty special animation which, with most other packages, would be truly cumbersome. CU



This is the original screen used to create a shadow effect in *Animator*. It was created in *DPaint*, and loaded into *Animator* where all the colours were turned to grey in tween one before the underlying colours were made visible in turn, over a series of separate tweens, to give the impression of a lengthening shadow.



And, as you can see from the screen and palette, the effect is quite marked. What you don't get from a still shot like this is the smooth effect as the shadow 'grows' under the main letters, giving the impression that the text is emerging out of the background, or the illumination is being lowered.

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BACK TO BASIC WITH BLITZ BASIC 2

Jason Holborn shows you how to create massive smooth scrolling bitmaps with *Blitz Basic 2.*

PART 2

By loading IFF bitmaps into your programs, you can use a paint program like *DPaint* to produce your game graphics.

```
File: demo5.bb2
; *** IFF Picture Load demonstration
; *** By Jason Holborn

; *** Define bitmap...
BitMap 0,320,256,5

; *** Load picture...
LoadBitMap 0,"PICS:BlitzPic.IFF",0

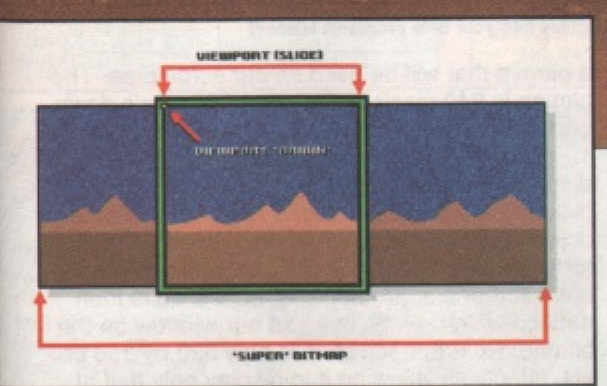
; *** Switch to Blitz mode and
; *** Initialise display...
BLITZ

Slice 0,42,320,256,$fff8,5,8,32,320,320

; *** Use picture's palette...
Use Palette 0
Show 0

MouseWait
```

With a little bit of clever coding, *Blitz Basic* can be used to create some fantastic scrolling effects.



Hardware scrolling works by progressively changing the position of the viewport origin so that new areas of a superbit map are exposed.

Welcome to the pages dedicated entirely to Acid Software's *AMOS*-bashing *Blitz Basic 2*, a BASIC programming language that can be used to create anything from high-speed arcade games, utilities and even serious software.

Last month, we started our look at the hidden powers of *Blitz* with a rundown of *Blitz*'s powerful slice and bitmap commands. These two commands are very important as they allow you to open up hardware-level screens just like those used in professional games software.

So far, however, our bitmaps have been rather boring. Opening up a basic 320 by 256 pixel screen with 32 colours is all very well if you're writing nothing more than a paint program, but arcade games tend to be somewhat more demanding. Thankfully, *Blitz Basic* is more than a match for the job – not only can you create oversized 'super-bitmaps' and scroll them smoothly using the Amiga's hardware scrolling facilities, but you can also load standard IFF pictures into them beforehand. This comes in particularly useful if you're writing a game because, although gameplay is important, it's the quality of a game's graphics that really make them shine. So, you can design your game's background graphics in *DPaint*, and then pull them into your *Blitz* program without a worry.

IFFY SCREENS

Loading graphics saved in IFF format in *Blitz* is more complicated than it is with *AMOS*. Whereas *AMOS* takes away virtually all the work of setting up the screen, initialising the screen's palette etc, *Blitz* isn't so user friendly. If you create a bitmap and a slice for your *Blitz* screen and then load in your IFF graphic, *Blitz* won't recognise the picture's palette and will revert to its own. The reason for this is simple. All *Blitz* bitmaps that you create need to have an additional 'palette' object assigned to them that hold the screen's colour palette definitions. This isn't as complicated as it sounds, however, so you can stop biting your nails! First of all, load a picture into a *Blitz* bitmap, tell *Blitz* that you'd like it to hold on to the picture's colour palette by giving it the number of a palette 'object' that is to hold the palette information. *Blitz* automatically creates a palette object whenever one is needed, so there aren't any complicated memory allocations that need to be made.

The command to load a picture into a bitmap is – not surprisingly – 'LoadBitMap' and it has the following format: `LoadBitMap BITMAP, FILENAME, PALETTE BITMAP`. The Bitmap parameter is fairly obvious. In order to load a picture into a bitmap, you must have previously created a bitmap that will hold the picture. This parameter tells *Blitz Basic* the number of the bitmap that you wish to load the picture into. Take care, however, to make sure that the bitmap that you try to load the picture into is of the same depth as the picture – if you try to load a 32-colour picture into a 16-colour bitmap, for example, your program will crash.

The filename parameter is pretty obvious too. It tells *Blitz Basic* the name of the picture that you wish to load anywhere it can be found. Note that the picture must be in standard IFF format.

The palette parameter is a number that tells *Blitz Basic* that you'd like it to store the palette information from the picture into a palette object. If you don't add this parameter, the picture's palette will be lost. *Blitz Basic* copies the picture's colour palette into a palette object and uses the number that you passed as the palette object's 'identification' number.

Blitz may be powerful, but AMOS still does offer a number of features that would have benefited *Blitz* greatly. One of these features is AMOS' ability to store pictures into permanent memory banks, therefore removing the need to hold all your game's graphics on disk in IFF format. This, unfortunately, makes them easy targets for hackers and crackers that may want to personalise your graphics with the names of their trumped-up cracking crews. Not only that, but it's down to the programmer to make sure that background graphics are loaded into memory each time the game is run. Simply creating a slice to display your bitmap won't make the picture that you've loaded display on the screen using its own colour palette. Once you've created a slice for your bitmap, you need to tell *Blitz* that you'd like the slice to use the colour palette that you stored the picture's colour palette in when the picture was loaded with the 'LoadBitMap' command. This is very easy – all you have to do is to add the command 'Use Palette' to your program and the palette information from your picture will automatically be transferred to the current slice. Here's a quick demonstration program that creates a 32-colour bitmap, loads in a 32-colour picture and then displays it using its correct colour palette – note that the filename I have used will have to be changed so that it points to a picture that you want to use.

```
;*** IFF Picture load and display
demonstration;
  ;*** By Jason Holborn;
  ;*** Define a low resolution 32
colour bitmap...
  BitMap 0,320,256,5
  ; *** Load picture into bitmap and
store palette;
  ; *** into palette object
0...LoadBitMap
0,"PICS:BlitzPic.IFF",0;
  ; *** Switch to Blitz mode and ini-
tialise slice...
  BLITZ
  Slice
0,42,320,256,$FFF8,5,8,32,320,320;
  ;*** Set palette to slice and turn
on display...
  Use Palette 0
  Show 0
  MouseWait
```

Once you've learned how to load pictures into a *Blitz* bitmap, it's fairly simple to create some very exciting scrolling effects with *Blitz Basic*. *Blitz* supports a number of scrolling techniques which break »

» down into what games programmers would call 'hardware scrolling' and 'software scrolling'. The only real difference between these two techniques is that unlike hardware scrolling which is handled by specialised hardware built into the Amiga's custom chips, software scrolling is handled by *Blitz* itself using the Amiga's blitter chip. Software scrolling is undoubtedly far more flexible than hardware scrolling but it does have the disadvantage of being somewhat more complicated. Perhaps we'll return to the subject of software scrolling in a later issue...

HARDWARE SCROLLING

Hardware scrolling is a scrolling technique that uses the Amiga's built-in screen scrolling hardware. Yes, even without a programming language as powerful as *Blitz Basic*, the Amiga's hardware is more than capable of scrolling screens at unbelievable rates. Indeed, hardware scrolling is so fast that it's actually possible to scroll a screen faster than the Amiga's display hardware can redraw the display that you see on your Amiga monitor or TV.

Hardware scrolling does have its limitations, however. Because it can only scroll whole screens, it does tend to be rather memory intensive. If you were writing an arcade game that used a scrolling background that continuously changed (*Scramble*, for example), the entire background would have to be held in memory as a massive bitmap. Even a fairly small bitmap consisting of twenty low resolution screens would eat up over 200k – and that's just for a 2-colour bitmap! A 32-colour bitmap would be over 1Mb! There are ways to get around this limitation, but it's down to you to write a more efficient routine.

To understand how hardware scrolling works, you need to know a little about what makes an Amiga display. As any hardware programmer will tell you, the Amiga's display is split into two components – the main display bitmap (the area that your programs draw into) and the display viewport (the slice). The slice is your 'window' on the bitmap that is held in the Amiga's memory. By creating a bitmap that is larger than the view port, you can create terrifically-smooth scrolling effects simply by moving the position of the viewport so that it displays a different section of the bitmap. Take a Bitmap that is 640 by 256 pixels in size, for example. If your slice were 320 by 256 pixels, then only half of the Bitmap could be displayed at any one time. Using hardware scrolling however, it is possible to change the slice's origin so that all of the SuperBitmap can be viewed. With a game that needs the background to be scrolled continuously in one direction, programmers cheat by looping the position of the slice around the Bitmap so that when the scroll reaches the far end of the Bitmap's boundaries, the slice's origin is reset so that the first part of the bitmap is displayed.

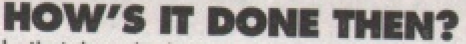
Hardware scrolling is one of *Blitz Basic*'s most powerful facilities yet, considering its complexity, it's surprisingly simple to incorporate a hardware scrolling screen into your own *Blitz* programs. Indeed, all that is required to get things moving (if you'll pardon the pun) is a slightly extended version of the 'Show' command that we used to display a bitmap within a slice. If you know your *AMOS*, then you should feel instantly at home with this new version of the show command as it works in virtually the same way as *AMOS* screen offset command. The extended version of the show command is as follows:

```
Show BITMAP, X, YBITMAP********
```

The bitmap parameter holds the number of the bitmap that is to be displayed within the current slice. If, for example, you created a bitmap using an identification number of zero, then this value of zero must be passed to the show command in order for *Blitz* to know which bitmap is to be displayed.

The X parameter holds the offset value (in pixels) of the top left-hand corner of the slice in relation to the left-hand edge of the bitmap. If, for example, you wanted to place the slice exactly 20 pixels left of the left hand edge of the bitmap, then you'd feed the show command a value of 20. By altering the value of this parameter in fixed steps, smooth horizontal scrolling is possible.

The Y parameter holds the offset value (in pixels) of the top left-hand corner of the slice in relation to the top of the bitmap. If, for example, you wanted to place the slice exactly 40 pixels down from the top of the bitmap, then you'd feed the show command a value of 40. By altering the value of this parameter in fixed steps, smooth vertical scrolling is possible. Before we dive in and take a look at a demonstration program that shows how to put all this theory into action, it's worth noting that in order for your scroll to run at the correct speed, it needs to be synchronised with the redrawing of the screen using the *Blitz* VWait command. This is exactly the same as the Wait VBI command in *AMOS*. All it does is to force your program to halt execution until the next frame so that everything runs in sync. If you were to simply scroll your screen without tying it in with screen redraws, the scroll would appear to go crazy. It's worth noting too that only a single VWait command must be performed for every loop of your program and even then it must not be called until every part of your game's main game loop has been performed. If, for example, you were writing a simple shoot 'em up, you'd scroll the screen, move your 'shapes' (blitter objects), check for collisions etc and then (and only then) call the VWait command.



HOW'S IT DONE THEN?

Let's take a look at an example program. Once again, it's down to you to create a background picture in *DPaint* that can be loaded into the 640 by 256 pixel bitmap that the program creates. The demonstration only uses a 16 colour bitmap, so you should be able to create a suitable image regardless of whether you own an AGA machine. Once you've created your bitmap, save it out and substitute its filename for the filename that I've used in the listing.

```
  ; *** hardware scrolling
  demonstration;
  *** By Jason Holborn
  ; *** Create 16 colour 640x256
bitmap...
  BitMap 0,640,256,4LoadBitMap
0,"PICS:Scroll background.IFF",0
  ; *** Create 320x256 slice and set
its palette...
  BLITZ
  Slice
0,42,320,256,$FFF8,4,8,16,640,640
  Use Palette 0
  Repeat
  ; *** Count from 0 to 319 in steps of
4...
  For x=0 to 319 Step 4
  ; *** Change screen offset value...
  Show 0,x,0
  ; *** Wait for vertical blank...
  VWait
  Next x
  ; *** Repeat until left mouse button
is pressed...
  Until Joyb(0)>0
```

The above listing is fairly self explanatory, but let's take a look at it anyway. It starts by initialising a bitmap that will be used as our scroll area. The bitmap is 640 pixels across and 256 pixels down and four bitplanes in depth (giving a maximum of 16 colours). A picture with these exact same dimensions is then loaded into the bitmap from disk and the picture's palette is stored into palette object 0. Once this is done, the program then turns on *Blitz Basic*'s *BLITZ* mode, allowing us to open screens at hardware level. A slice is then defined which will be used as our window on the bitmap. Note that the slice is only 320 by 256 pixels, effectively allowing it to display only half of the bitmap at any one time (the rest will be hidden). The last two parameters of the slice command tell *Blitz* how wide the bitmap that we're going to use this slice to display is – in this case, it's 640 pixels across. With the slice defined, the palette that we extracted from the picture that we loaded earlier is then transferred into the slice's palette so that the bitmap will be shown with its correct colour settings.

· With all the setting up now complete, we can scroll the bitmap. Two loops are used – a 'Repeat...Until' loop and a 'For...Next' loop. The first of these has been added so that the screen will continuously scroll. The 'For...Next' loop, however, controls the hardware scrolling mechanics. It counts from 0 to 319 in steps of 4. The values that it produces are sufficient enough for the entire bitmap to be displayed. It's worth noting that the 'step' value defines the speed of the scroll – if you decrease it, the scroll will go slower and vice-versa. Inside the 'For...Next' loop, the value produced by the loop is passed to the 'X' parameter of the 'Show' command so that the horizontal offset of the slice relative to the bitmap is progressively changed. Each time the show command is called, the program is halted by the 'VWait' command before the next iteration of the 'For...Next' loop.

Finally, the program is terminated by checking the status of the left mouse button using the 'Joyb()' function. When you run this listing, however, the program will not halt until the scroll has completely run its course, so be patient. CU



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NEXT MONTH

We'll be taking our hardware scrolling one step further by taking a look at dual playfield screens, an important aspect of *Blitz Basic 2* that is used extensively in games software. So watch this space.



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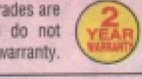
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VIDEO TITLING ON YOUR AMIGA

PART 7

Messing about with videos is never going to be easy, but anyone armed with a copy of *AMOS* and possessing basic computer and graphics skills should be able to get a grip on video making in no time. Jim Strutton leads you through the sub-titling maze.

AMOS VIDEOTITLES

Using the Amiga along with video equipment is not a simple task, but with a little study and application, most of us seem to manage it. Having got the basic computer and graphic skills, it is not such a great leap as you may have expected to do a bit of useful programming. Now, programming the Amiga in the raw is a skill that takes much effort, but using software like AMOS it is not too difficult.

As AMOS was included on a recent coverdisk, the program should be available to all CU AMIGA readers. One point I would make though: it is really worth getting the manuals if you intend to go a bit further.

So, if you have a Title program and the faithful copy of *Deluxe Paint*, why on earth would you need to use something like *AMOS* to create yet more graphics? Well, let me tell you how I use it professionally and maybe that will give you some ideas. I have had occasions where I have had to produce some videos for people with hearing difficulties. These needed to have sub-titles to make the dialogue clear. Rather than do a series of screens, I wrote a simple program that would take a text file of the words and show them in a two-line box at the bottom of the screen. The reasons for doing this will be obvious to anybody who has had to do any sub-titles. After you have edited the video footage, you have to take the speech and write it down. You then take the words spoken and edit them into a form where you retain the sense of what was said, but make it shorter so that it is quicker to read and understand. There are some very clever people in broadcast TV who can do this in real time as a program is transmitted, but I am sure that they must have at least a basic script to work from.

The first program example given overleaf just

takes in a simple text file and outputs the text two lines at a time. In use you would take the prepared script and then run the video through a GenLock to a copy that will have the sub-titles. As you play the video back, you listen to the sound and click the mouse to advance. The technique is to display the text just after the words are spoken, leaving the words on the screen long enough for them to be read easily.

In the long term you need to plan this at the editing stage to give sufficient pauses to allow the words to be read. You can only really get good at this with practice. Apart from sub-titles, you could adapt the software to show a single line caption at the bottom of the screen.

On a commercial level, the basic program for sub-titles was extended for a sister company in France as a system for creating karaoke videos. The problem was to create videos for the American market of children's nursery rhymes, using production facilities in France. For those of you who can remember going to the pictures on a Saturday morning, there was always the sing-along where you had to follow the bouncing ball on the screen. As no software existed to create this on computer, I designed and wrote a system in *AMOS* that would take the lyrics of a song and display them on the screen with an animated pointer moving along with the words. I can't publish the software as it is a commercial product, but it's worth mentioning as something that can be created with software like *AMOS*.

```
Rem Subtitle version 1.3,
Two text lines in shaded box, Jim Strutton 1993
'
Rem Open a LoRes screen and set up some colours
Screen Open 1,320,256,16,0
Palette $0,$222,$EEE,$11E,$333,$444,$555
'
Rem This loads a data file which is composed of lines of dia-
log
Rem Create the file with a text editor in plain characters
Rem Call the file "Dialog.SUB" and put it on a disk in DF0:
Rem Keep to about 30 letters per line and terminate each
line
Rem With "Ctrl M" plus <Enter>. Leave two blanks lines at
the end
Rem of the file
Dir$="DF0:"
F$=Fsel$("*.SUB","Dialog.SUB","Load The Data File")
If F$="" Then F$="df0:Dialog.SUB"
Open In 1,F$
'
Paper 0 : Cls : Curs Off : Hide
'
Rem This is the main Program loop
Do
 E=Eof(1) : If E=-1 Then Exit
 Input #1,L1$ : Input #1,L2$
 Wind Open 1,31,220,35,2
 Pen 2 : Paper 1 : Curs Off : Clw
 Centre L1$
 Cdown
 Centre L2$
 MLOOPING
 Wind Close
Loop
'
Rem This is the routine to detect if the right mouse button
has been
Rem Clicked to move onto the next two lines
Procedure MLOOPING
 Do
  M=Mouse Click
  If M<>0 Then Exit
 Loop
End Proc
```

```
Rem Program to fill a screen with text and then
fade it to a blank
'
Rem Screen Jim Strutton AVPG 1993
'
Rem Screen Opening and setting colour stuff
'
Screen Open 0,320,256,2,LORES : Curs Off : Flash Off : Cls 0
Screen To Back 0
Screen Open 1,320,256,2,LORES : Curs Off : Flash Off : Cls 0
Colour 0,$0 : Colour 1,$11F
'
Rem Write Text All over Screen from top left corner
Locate 0,0
For X=1 To 50
Print "Amiga Video Producers Group";
Next X
'
Rem Pause so you can see the screen
Wait 50
'
Rem Make Screen 0, which is the blank screen "Appear"
over the top of
Rem The screen with the text on it. The number "37"
changes the type
Rem Of transition effect you get. Try changing the number,
odd numbers
Rem not divisable by five seem to work best.
'
Appear 0 To 1,37
```

FONT RUNNERS

I don't think I will ever be able to write an article on titles without mentioning fonts. *AMOS* treats fonts in a very special way and it is important to grasp the principles involved to understand the differences. There are two ways of getting text on the screen with *AMOS*. The first and simple way uses the system font. This is the font used by Workbench for all text and would normally be Topaz, unless you have used a program like FastFonts to change it. *AMOS* is able to take this default font and render it to a screen by using the Print or Centre commands. The position the text is placed on the screen is set by text rows and columns. Each row is the height of the default text font, while the column is the default width. But, as you know, some of the better fonts available for the Amiga are in sizes other than the default font. These fonts are known in *AMOS* as graphic fonts, and they have their own set of commands to position and render them. Initially they have to be loaded from disk and selected – a process that can get a bit fraught. Once loaded, the position is defined in screen pixels and the font is rendered using the Text command.

The example for sub-titles only uses the standard Amiga font and the simple commands to render the font. For some uses it would be more appropriate to use a larger font, rendered with an outline and drop shadow to make it stand out more. This is the technique used for the text on the commercial versions of the sub-title program and the karaoke software. Both of these programs and the source code can be bought from the AVPG. Normally they sell to professional organisations for £250, but for personal use, CU AMIGA readers can obtain a full set for just £10 from the AVPG (Amiga Video Producers Group, tel: 0793 870 667).

There are two other commands that can be of use to the video maker. First off there is the Text Scroll command. I have included a simple example of this command for you to try. The key point to bear in mind is that the text is scrolled a line at a time and that the font will be the simple default. As the font is scrolled by the line rather than by the pixel, the effect is quite jerky. However, if you use it to simulate text coming over a teletype, or even a computer screen, you can get a very effective result. It can be a different way of showing ending credits on your latest holiday epic, for instance.

Another useful trick *AMOS* can perform is a fade between two graphic screens. But rather than using the Fade command, which does exist, the best command to use is Appear. The effect works by loading two screens into *AMOS*, displaying one and then fading the first into the second. This can be a quicker solution than creating an animation to do the same job. For those of you with a simple GenLock with no fade facility, if you load a graphic of a blank screen, followed by a title screen, you can fade from the blank to the title and then back again to give the effect of a title that fades in then out.

STORE POINTS

Finally, you may remember that in the article Lights, Camera, Action I mentioned making a rolling video program for use in a shop window or as an in-store video display. Well, *AMOS* gives you even more possibilities! Firstly, you can set up the display sequence in *AMOS* and leave the program running out to video.

The main benefit is that rather than having to recreate the text screens each time it needs a change, you can load them in by way of a text file and let *AMOS* render them for you.

The next and most exciting option, is a venture that is soon to go into operation, using an Amiga as a fully featured display system. The software has all been written in AMOS and it is an interactive retail display system for a travel company. An Amiga 1200 is mounted in a secure housing with a monitor screen on the top. The user never sees the computer as that is locked well away. All they can see is the screen and three coloured buttons. The buttons are connected to the joystick port on the Amiga and the user can request information from the system by selecting options from a choice of three. For more sophistication, a second version has a passive infrared detector, or PIR, which is similar in the way it operates to the devices used in security alarms. When set off by the heat of somebody approaching the display, it triggers a sequence and plays some music to attract attention.

All of this is very simple stuff using basic unmodified Amiga kit, which just goes to show how powerful and flexible the machine really is. CU

```
Rem simple text scroll program
'
Screen Open 0,320,256,2,LORES : Curs Off : Flash Off : Cls 0
Colour 0,$0 : Colour 1,$EEE
'
Locate 0,30
Centre "VideoTEXT"
Wait 50
For Y=1 To 31
Vscroll 3 : Wait 3
Next Y
```

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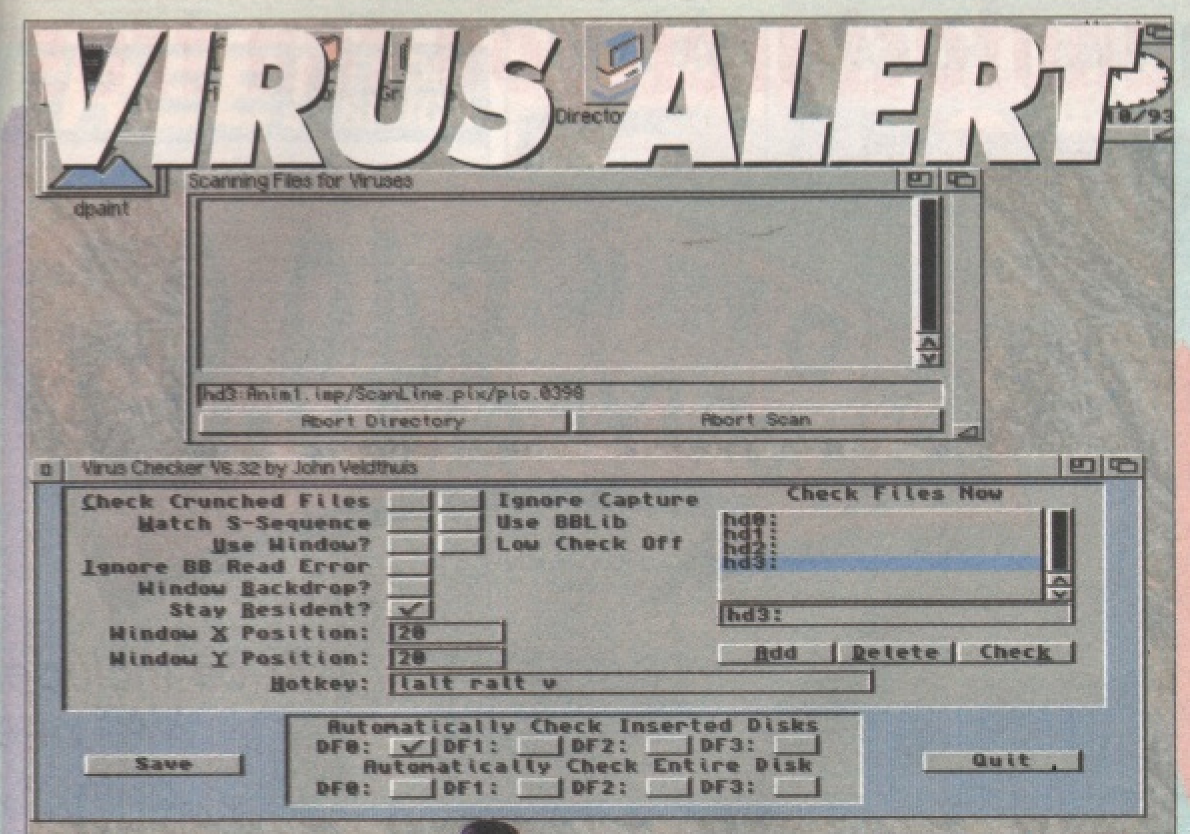
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VIRUS ALERT





Best to wrap your Amiga up tightly 'cos there are a lot of nasty viruses out there. John Kennedy explains how you can tell if you have a virus, what to do about it and how you can prevent it happening in the first place.

Left: VirusZ is another excellent weapon against virus programs. Here an evil looking bootblock has been detected and is about to be blasted.

A virus is not a living organism – it is a computer program. If a system has been 'infected', the virus program is present somewhere in memory.

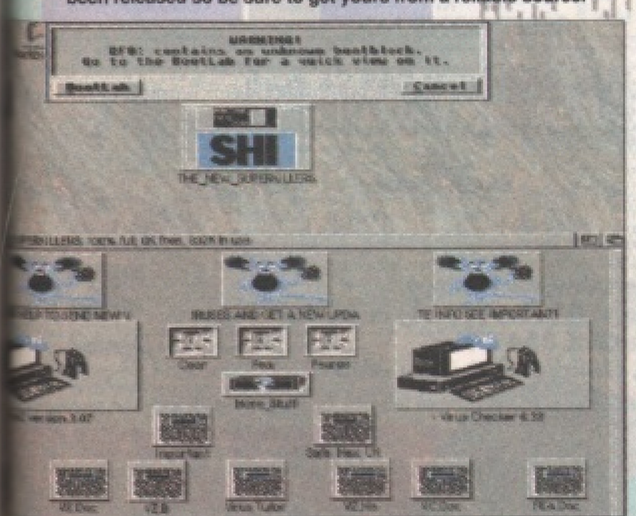
There are two goals for a virus program. The first is to copy itself to as many different systems, and the second is to perform some form of sabotage when they get there. If a virus is present in memory, it will attempt to copy itself to every disk which is inserted into the computer's floppy disk drive. It can do this in several ways, such as writing to the bootblock of the disk or attaching itself to another file (a link virus).

What a virus does when it is present in your system depends on which strain it is. Some virus programs are merely irritating, and will display silly messages or turn your pointer into a rude shape. Others are more destructive, and will destroy all the data stored on any disk inserted by overwriting it with garbage. Both floppy and hard drives are susceptible to damage in this way.

WHAT ARE THE SYMPTOMS?

The symptoms of viruses are as follows: Inexplicable crashes from once reliable programs, strange messages (usually profane) or graphics, loss or corruption of files and commercial games will no longer boot.

VirusChecker is an excellent virus killer. Some fake versions have been released so be sure to get yours from a reliable source.



SAFE HEX INTERNATIONAL

Safe Hex International. is a new UK virus centre now open and they will be happy to supply you with the very latest anti-virus software. A disk of the latest killers costs just £2, and for details you should contact:
SHI Regional Virus Centre UK, 304 Leeds Road, Eccleshill, Bradford, West Yorkshire, BD2 3LQ.

WHAT TO DO IF I HAVE ONE?

The first thing to do is to get rid of it! There are many programs in the Public Domain which will search out and destroy virus programs. CU AMIGA always tries to fill any empty space on the cover disks with a good program. The anti-virus software will search through memory and remove any resident programs. If you insert your disks it will then examine them for damage and other copies of the virus program. Hard drives should also be checked, as a virus could lurk away for weeks in an obscure drawer of a large hard drive. When the anti-virus software finds something suspicious, it will ask you if you wish to re-write the bootblock or boot sectors. Be careful! If the disk in question is a normal AmigaDOS disk then go ahead with the operation. However, if the disk is a commercial game or a demo read the next bit first.

Most games and many demos put their own special programs in the boot block of a disk, in order to prevent piracy or provide a pretty screen as soon as the disk is inserted. The anti-virus software has no way of knowing if the boot block contains a virus, or such a program. If a game or demo boots normally, it is reasonably safe to assume that it is free from viral infection. To be absolutely sure you may want to use a special program which can make a copy of the bootblock and save it as a file. You can then safely overwrite the existing data, and if the game/demo fails to boot you need only copy the back-up data back to the disk. If the program does boot you can probably assume the bootblock you copied contained a virus. If a commercial game has been destroyed, get in touch with the publisher. They usually offer a replacement service for a small fee. So, now you know all there is to know about viruses, check out how to prevent them in the box out and you should be safe from all harm. CU

WHAT CAN I DO TO PREVENT A VIRUS

1. *Make back-ups.*
Back-up important data regularly. If disaster strikes, you may be able to resurrect at least some of your work.
2. *Always write-protect floppy disks.*
A virus cannot be written to a disk which has its Write Protect tab set. Always protect commercial games and demos before use.
3. *Switch off.*
Switch your computer off between games. A soft-reset will not clear the memory totally, and a resident virus may survive.
4. *Use a hardware protector.*
You can buy small gadgets which will inform you if the boot sectors of a drive are being written to. Some floppy drives also have this feature built-in.
5. *Use anti-virus software.*
Get hold of the latest anti-virus software and use it. Every time you load Workbench, start the virus software. On Workbench 2 and 3 machines this can be done by copying the software into the drive called 'WBStartup'. Workbench 1.3 machines will require an addition to the startup-sequence in the s: directory.
6. *Don't use pirated software.*
As pirated software comes from dubious sources, you will have no idea who has used it before you. It is possible that a virus has been attached, either intentionally or by accident. Always check archived files as well – a virus can be squashed like any other program.
7. *Be careful when using PD software.*
Before you use any PD software run your anti-virus program. This is especially true when files have been downloaded from a Bulletin Board System

JARGON BUSTERS

BOOTBLOCK: The first few tracks of a floppy disk contain important information for the Amiga's operating system. It is possible to write a small program to fit into these tracks, and although displaying a picture is one possibility, a virus is another.
VIRUS: A program which will attempt to copy itself to other disks, and then damage the data stored there.

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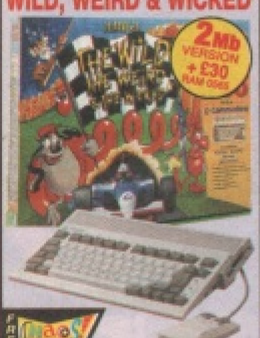
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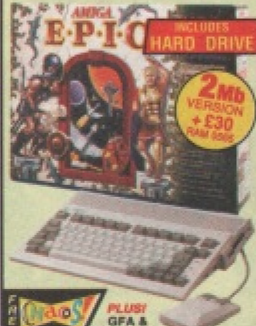
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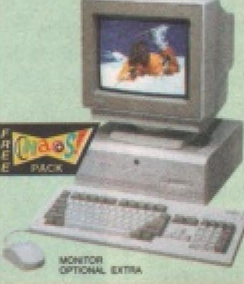
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INSIDE AREXX

PART 2



AREXX

Jason Holborn takes you gently by the hand through your first *ARexx* program.

If you were lucky enough to have found an Amiga crammed into your Christmas stocking, then you're probably starting to wonder why Commodore didn't include a programming language with your new machine. Well, the truth is that they did – it's just that it's not that easy to find. If you were with us last month (and if you weren't, why not?), then you'll already know that hidden away on your Workbench disk is *ARexx*, a powerful script-based programming language that can do everything that traditional languages like Basic and Pascal can do, plus a whole lot more besides.

Last month we started our look at *ARexx* by discussing what *ARexx* actually is and what it's capable of. If you missed that issue, I'm sure our illustrious editor won't mind me mentioning that back issues are still available. In the meantime, however, let's take our *ARexx* tutorial one step further into uncharted territory – we're going to write our first *ARexx* program. Don't worry, *ARexx* isn't as complicated as it may first seem. Providing you have a fairly basic grasp of AmigaDOS then you're already half way there!

BY THE NUMBER

Before we take that all-important first step, however, now is as good a time as any to introduce the concept of *ARexx* variables. If you've ever had any experience of programming languages before, then chances are that you've already encountered this fundamental aspect of all programming languages. For the beginners amongst you, a variable is essentially a method of temporarily storing discrete items of information within the memory of your Amiga. Under normal circumstances you'd have to know exactly where in the Amiga's memory the data has been stored. But variables take this hassle away from you by allowing you to create pigeon holes in the Amiga's memory which can be referred to using labels that you designate yourself. You could, for example, create a variable called AMIGA or even WOBBLY if you so wish.

Variables can handle just about any type of data ranging from a single character, an integer, a floating point number or even a string of letters. Unlike other programming languages, however, *ARexx* variables are what are known as 'typeless'. That is, once a variable has been defined to hold one particular type of data, it isn't restricted to just that type of data. Say, for example, you created a variable called FRED that was initially used to hold a number. Just because it started life as a number variable, that doesn't mean that it will only hold numbers – you could quite easily transfer a string of characters to it without *ARexx* batting an eyelid. Obviously you can't then perform a mathematical operation on it, but that's about the only restriction that *ARexx* places. Even then, *ARexx* will happily treat a string variable containing '12' as both a string and a number. Clever eh!

GET PROGRAMMING

Anyway, now we've got that out of the way, let's get stuck into our first *ARexx* program. If you haven't already done so, you'll need to install *ARexx* by loading up Workbench and then double clicking on the RexxMast program that you'll find in the System drawer on your Workbench disk. If you intend doing a lot of *ARexx* coding then it may be worth permanently

AREXX UNDER CONTROL

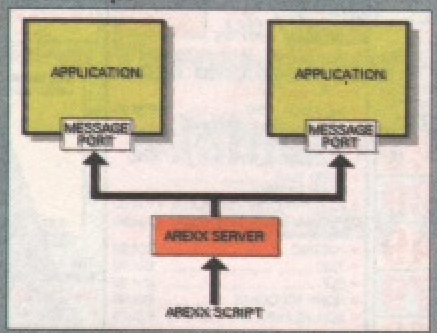
CU AMIGA isn't the sort of magazine that bores advanced readers with months of tedious text for beginners. Starting this month, we'll be launching a separate section within the A*Rexx* column aimed at those of you who have mastered the basics and want to know how to put all this theory into practise.

Every month we'll be taking a look at how *ARexx* can be used to automate the operations of several popular ARexx-compatible applications. If you'd like to make any suggestions about which programs should receive the *ARexx* treatment, then write in.

Before we dive it at the deep end, however, it's worth taking time to discuss exactly how ARexx communicates with other applications. Task communication is an integral part of the Amiga's advanced message-passing operating system Exec, and ARexx builds upon this system to allow any application that's *ARexx* compatible to send and receive commands to and from other applications that are currently running.

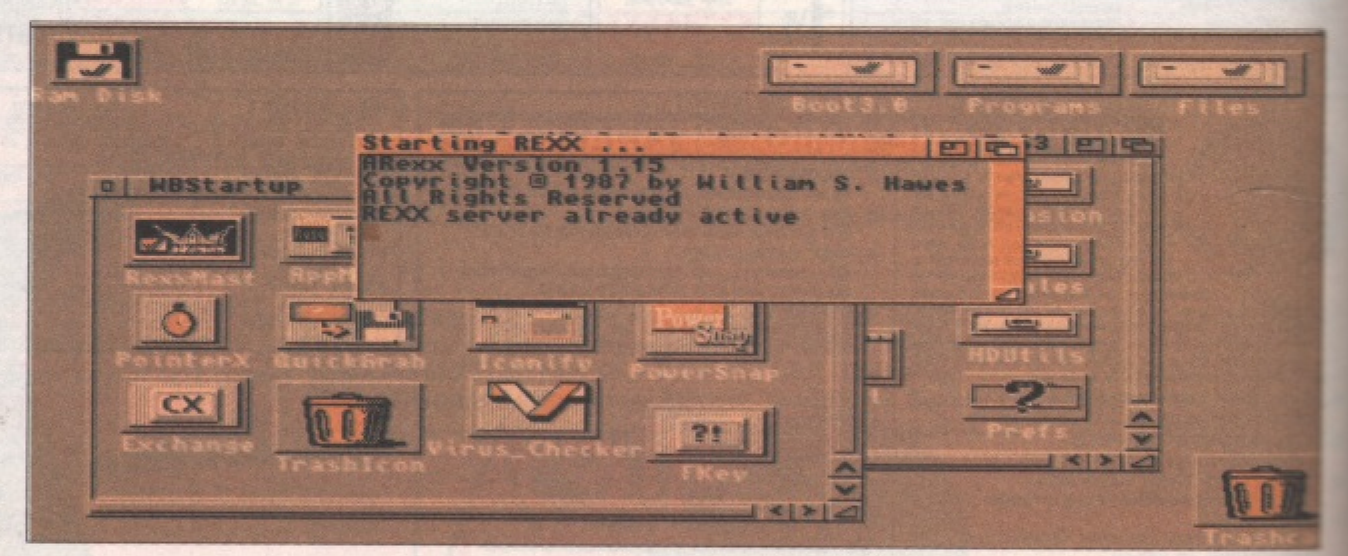
The best way to envisage how this works is to think of a telephone network. Homes that have a telephone line are connected together through a central exchange that's responsible for making the connections between two lines. In the case of the Amiga, it's ARexx that acts as the telephone exchange, with each application having its own phone line (or, in ARexx terms, a 'message port'). Just like a telephone network, each message port has its own unique name that is used to distinguish it from any other message ports. ASDG's *Art Department Professional*, for example, has a message port called ADPro, and even AmigaDOS has its own port called Command.

When your *ARexx* script attempts to communicate with an external program like ADPro, *ARexx* must first attempt to establish a communications link with the application. If the attempt was unsuccessful, chances are that the program has not been loaded. If, on the other hand, the attempt was successful, your script is then free to communicate with that application. From here on you can call the internal *ARexx* functions built in to that program to control its operations.



External applications can be controlled directly by *ARexx* by sending commands to the application's message port.

Very few *ARexx* ports have the same name as the applications they are attached to. You should find the ARexx port name for the application that you'd like to control in the program's manual, but *ARexx* does provide a very handy facility that will allow you to automatically display the names of all *ARexx* message ports currently available. It's worth noting, however, that the program must be running in order for *ARexx* to find its message port. Give this listing a try: /* Message Port Finder */ Say "Message ports..." Say Show(Ports) Exit.



Before you can write an *Arexx* program, you need to make sure that *Arexx* is up and running by double-clicking on the RexxMast icon.

```
ench Screen
Boot3.0   Programs   Files
AmigaShell
> ED RAM:MyProg.REXX
> Type RAM:MyProg.REXX
  My first Arexx program
 "Please enter your name"
 NAME
 "Hello there" NAME
> RX RAM:MyProg.REXX
ease enter your name
 Smithson
llo there DAVE SMITHSON
> Good eh!!!!
```

If you type in the *ARexx* listing this is what you should see. Not awe inspiring, but a working *ARexx* program nonetheless.

installing this program so that *ARexx* is automatically loaded whenever Workbench is loaded. Don't worry, this isn't as complicated as it sounds – simply drag the RexxMast icon across from the System drawer and drop it into the WBStartUp drawer.

When you double click on the RexxMast icon, a window should momentarily pop up onto the Workbench screen, informing you that *ARexx* has been successfully installed. If everything checked out okay, double click on the Shell icon and drop down into AmigaDOS. Most programming languages these days have their own editors which you use to write programs, but *ARexx* is somewhat different. Instead you'll need to write all your *ARexx* programs using a text editor. Thankfully, there's also one on your Workbench disk, so absolutely no need to worry here either! So without further ado, enter the following command at the Shell prompt:

Ed RAM:Myprog.Rexx.

After a couple of seconds disk access, the Workbench *Ed* text editor should spring to life before your very eyes. *Ed* works in a very similar manner to a conventional word processor (minus the flashy page layout tools, of course!), so you shouldn't have too many problems getting to grips with it. If in doubt, refer to the Workbench manual that came with your Amiga for a more in-depth explanation of how *Ed* works.

Anyway, let's get down to some serious coding – warm up those typing fingers by entering the following *ARexx* program.

```
/*
My First ARexx Program
*/
(line space)
Say "Please enter your name"
Pull NAME
Say "Hello there" (space) NAME
Exit
```

Once you've typed this little program in – making sure that you haven't made any mistakes – save it by pressing the Esc key followed by the X key. The *Ed* window should close and you'll be returned to the Shell window. All that now remains to do is to run our *ARexx* program by entering the following command at the Shell prompt:

RX RAM:MyProg

If all went well, you should now be staring at a line of text prompting you to enter your name. Do what it says and then press the Return key and the Amiga will greet you. Clever eh! Okay, so it's hardly very exciting but, as a demonstration of how to write an *ARexx* program and then run it, our little program has served its purpose beautifully. But how does it actually work? Well, before we get too bogged down in the technicalities, it's worth noting the /* and */ symbols that you'll see at the start of the program. As any C programmer will tell you, these are what are known as 'comment markers' and they mark the start and end points of a comment respectively. Any text that you enter between these two markers will be completely ignored by *ARexx*, so they're there purely for the benefit of the programmer. Unlike other languages, however, these comment markers aren't optional – all *ARexx* programs must start with a comment. If you write a script that simply drives straight into code without starting with a comment, you'll get an error message. A rather strange limitation maybe, but I'm sure that all professional programmers will agree that adding comments to your *ARexx* scripts is a damned good idea anyway! You may know what *ARexx* script does when you first write it, but your coding may not be quite so clear when you return to it after a couple of months. By imposing this restriction on you, *ARexx* could actually be making your life somewhat easier!

The core of the program is simple enough too. The program uses three *ARexx* commands – Say, Pull and Exit. Say is the *ARexx* equivalent of the Basic Print command and its sole role in life is to display strings of text on the screen. The Pull command has a Basic equivalent too – Input. As its name suggests, Pull is used to pull in a string from the user via the keyboard which is then stored into a variable (in this case, the variable NAME). Finally, the Exit command ends the *ARexx* script. CU

NEXT MONTH

We'll be taking a look at how to make decisions within an *Arexx* script. And starting next month there will be a regular section within the *ARexx* column that will show you how to use *ARexx* to control other applications.



WIRED WORLD

Enter hacker's paradise with John Armitage as he explores the worldwide network of free Amiga software.

Even if you use your modem regularly, you might never have come across the Internet – one of the Comms lesser known successes. Practically every large computer system across the globe is part of a huge electronic network called the Internet. Each computer on the network is called a Site, and many offer access to the general public totally free of charge.

What exactly has this to do with Amigas? Well, the Aminet is a collection of sites which all 'mirror' each other: that is, all files are duplicated between machines. As you might have guessed, the 'Ami' in Aminet stands for Amiga and the files which are mirrored are the largest collection of PD software in the world. Hundreds of megabytes of software, and it's all there for you free, gratis and for nothing.

SNAGSVILLE

How do you get at this software? Via the FTP or file transfer protocol. Basically, you need to get on to a machine with Internet access and FTP software – not something most people have in their front room.

Before you get all depressed, there are ways. First of all, if you are at university or college there could well be just such a machine waiting for you. For example, at my place of learning there is a network of DEC workstations. By logging on I can get directly onto any FTP site, and download programs at about 60K a second. The only problem is getting the programs off the DEC and onto an Amiga – the DEC doesn't have a floppy disk. The solution here is to log on to the matching network of PCs, and copy the files across.

There should be similar ways of transferring files at your local place of higher education. The best thing to do is ask the hairiest, most hackerlike looking student you can find. Failing all that high brow stuff, several on-line services have an Internet Gateway. CIX is one which immediately springs to mind.

LOGGING ON

To log onto a site, you run the FTP software and type OPEN <name> at the prompt. When asked for a username, you enter 'anonymous' and for a password enter your email address: the place you are calling from. Now you are on a UNIX–style terminal, from where you can move around the directories. Stick with the Public areas (enter cd pub) and look for the Aminet directory. Inside you'll find hundreds of programs, so pick one and enter get <filename>. Sometimes you'll need to enter 'bin' before you can download files – try it first without. Note that as a UNIX system, filenames are case dependent. After 'get' the files will be stored on your terminal and after that its up to you to get them into Amiga format. Enter close to quit the system. CU

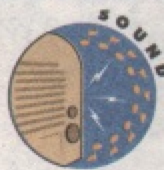
NEXT MONTH

More hints on getting into Aminet and what you might find there.



If you're in need of urgent help regarding your Amiga, then Q&A is the place to come.

SOUND ADVICE



Will the films that become available on the CD32 be recorded with the Dolby sound encoding system as used by the dedicated home movie laser disc players, or will the soundtrack be in ordinary hi-fi stereo?
Sean Christian, Douglas, Isle of Man.

The CD32 has the same sort of ordinary stereo sound outputs which a normal audio CD has, and is therefore incapable of any extra clever trickery. However, all VHS tapes which have the Hi-Fi Dolby symbol on them are capable of surround sound when played through a special decoder, so there is no reason why the soundtrack of feature films using the FMV cartridge could not be recorded in a similar way.

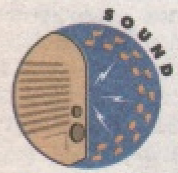
MEMORY MADNESS



I have an A600 with a 1Mb expansion card. I would like to add a 4Mb PCMCIA memory card. Could you please tell me how much chip memory will this give me? And how much fast memory will it give me?
J.R. Gellatly, Wallingford, Oxfordshire.

Any PCMCIA card will only add to the amount of Fast memory you have. Chip memory needs to be tightly coupled to the custom chips, and memory added via the PCMCIA port isn't.

SAY 'AAA'



In the interview with Commodore's vice president of engineering, Lew Eggebrecht (CU Amiga August 1993), Lew said that the new Amiga chipset will have eight voices with 16-bit sound. Please can you tell me more about this chipset? Is it really worth buying an A1200 now if the current AGA chipset is due for a revamp?
Kevin McGrath, Chadderton.

All I know about the chipset is that it will be many times faster than the current AGA system, offer true 24-bit colour with support for video compression and that much improved sound you're lusting after.

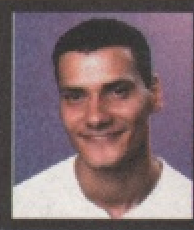
Now you want to know if you should wait. Well, of course you should wait. In a year or so when the new machine is available it will probably sell for about £50. But by then Commodore will have announced the Quadruple A chipset – it will have 32 voices, 64-bit colour, run faster than 1000MIPS and cost £10.

Be realistic. You can only buy what is available now. Who is to say that the new chipset will ever appear and for how much. You might wait a year for nothing, and in the meantime you could have been using the A1200 – probably the best Amiga ever built.

HERE THEY ARE FOLKS - THE Q&A TEAM



JOHN KENNEDY
Tipped for host of the new University Challenge series, John 'Bamber" Kennedy likes a starter for ten.



MAT BROOMFIELD
Mat would like to stress that he doesn't really look like this – but could you please write to him anyway?

SCREEN SCENE



I'm confused about monitors and I desperately need your advice. I have an A1200 and a Philips CM8833 MkII monitor, and all is working extremely well. I do a lot of word processing, and I am thinking of getting a monitor which will allow me to display my work in a higher resolution. However, I'm not sure about the difference between hi-res and interlace. I can't afford a multisync, but I am interested in getting a Commodore 1940.

What I really want to know is: what are the advantages of having a dual sync monitor, and would I need to buy anything else to get the best results from my A1200?
Emma Colley, Witney, Oxon.

A hi-res screen is at least 640 pixels across, and a super hi-res screen is at least 1,280 pixels across. An interlaced display is technically one which flickers as it updates faster than the monitor can cope with. But in Amiga terms it often means a display of about 512 lines.

When the A1200 (or A4000) is used with a dual-sync monitor, it can de-interlace the display which means you can have a 512 line screen with no flicker – and it's a complete revelation to use.

If you are word processing a lot you need three things: a rock steady display, a monitor with a good dot pitch (how detailed the text is) and a decent sized screen (at least 640x512 pixels). The Commodore 1940 will de-interlace the display, but it won't offer much in the way of clearer text, as its dot pitch is similar to the CM8833.

I would recommend you consider a monochrome monitor – you can buy PC-style monitors which will support a de-interlaced display and offer pin-sharp text for about the same price as a CM8833 (try Silica Systems on 081 309 1111). You can then use your Philips for games.

BRING BACK BASIC



I have recently bought my first Amiga – an A1200 and I find it far superior to my previous 8-bit computers. However, the problem is that the various manuals do not explain how to do your own programming. I would be very grateful if you could tell me the best books to start off with as I know very little about programming the Amiga.
Steve Ellis, Wrexham, Clwyd.

Unlike the 8-bit machines, the Amiga doesn't come with a programming language built in, so don't waste your time looking for a Basic interpreter lurking around. The nearest you'll find is *ARexx*, which is described in our tutorial series.

As for books, well, I could tell you to go out and buy the complete set of official reference manuals – but I won't.

What you need is a copy of *Amos* or *Blitz Basic*, which both come with good tutorial works. Perhaps this month's coverdisk will appeal to you as well...

FREE FLOPPY DRIVE



I have an Amiga 500 and I am thinking about getting a CD32. If I bought the CD32 expansion device with a parallel port, serial port and so on, would I be able to connect my A500 to the CD32 and use it with the A500's keyboard and disk drive?

Also, is there going to be a CD32 version of *Mortal Kombat* with 256 colours and use of the multi-button controller?
Chris Stevenson, Burnley, Lancs.

Although I have yet to see the CD32 expansion box, I think that I am correct in thinking that you won't be able to use your A500 as a keyboard and drive for the CD32.

What you will be able to do is use the CD32 as a CD-ROM drive for the A500, and access the many disks of PD and demo software with a program such as *Parnet*.

Of course, if demand is high enough someone will write the software to do what you require. And, similarly, if the CD32 sells well enough you can bet that *Mortal Kombat* will appear in all its gory (256-colour) glory.

TV HELL



I'm trying to connect my A600 to a television set. According to Commodore it is possible to connect the A600 to the TV via the SCART socket, but I have tried this with little success.

At the moment I have to be satisfied with colour composite signal.
Gerard Kelly, Munich, Germany.

It sounds like a problem with that good old almost-but-not-quite-a-standard SCART (or Peritel) connector.

Although the SCART connector can support separate red, green and blue lines, they are not always implemented.

If your television sports a true SCART compatible connector, the RGB signals from the A600 should drive it perfectly, and as you know give a much better display than with blurry colour composite.

Unfortunately, you can't get a picture, so therefore your TV is crap. Sorry.

LIBRARY EXPLOSION



I own an A600, and I'm having difficulties with the virus checker program given away on the CU Amiga coverdisk. I have dragged the icon into my Workbench Startup drawer, but when I reboot I get the message, 'Need explode library v14+'. Can you help?
Tracey Foulsham, Birmingham.

This letter sums up the dozens of similar queries regarding the dreaded exploding library, and the reply will hopefully help everyone to sort out their problem. When the Amiga boots, it likes everything to be in its place. It likes the AmigaDOS commands to live in the C directory, and the fonts to be in the FONTS directory. It also likes libraries to be in the LIBS directory. A library is a special piece of code which offers some common features to programs. In this case, the virus checker program needs some compression and decompression routines and these live, quite happily, in the explode library.

When you boot from the coverdisk, LIBS: is set to point to the LIBS drawer on the coverdisk, which contains the explode library. When you boot from your Workbench, however, LIBS: is set to point to the LIBS drawer on the Workbench – which probably doesn't contain the explode library.

So when you copy the Virus checker program, you also need to copy the library. Some programs come with a utility called something like 'install library' which will automatically copy across any required libraries.

However, being the kind-hearted soul that I am, here's a step-by-step guide on how to do it manually (oooer).

1. Boot from your Workbench in the normal way.
2. Open a SHELL window.
3. Put the coverdisk in the drive.
4. Enter COPY df0:libs/explode.library to RAM: This will make a copy of the explode library in the RAM disk.
5. Put your Workbench disk back into the drive.
6. Enter COPY RAM:explode.library to LIBS: This will insert the library into the correct drawer.

COBOL CONUNDRUM



I'm learning the COBOL programming language for my college course and I need a COBOL compiler for the Amiga. I've searched the PD libraries but with no luck. Can you please help me? I would be very grateful.
James Deadman, Welling, Kent.

First of all, commiserations on your unfortunate situation. I had to use COBOL as part of my so-called education, and what a waste of my life it was.

I recommend you change colleges to one which won't waste your time with this crappy language, but teaches something useful (such as C) instead.

In my case, this meant a change from the science to engineering faculties. In case you can't manage this, you'll need to get a PC emulator (software should suffice) and a PC COBOL compiler.

DTP ABC



For some time now I have been looking for a DTP package which includes powerful features whilst also being easy to use. Presently I do not own any DTP programs, but I want to produce high-quality work.
Andrew Chang, Wimbledon, London.

You missed out several important facts, Andrew. How much do you want to spend? Do you have a printer, or will you be using a bureau?

If, as I suspect, you want to dabble your toes in the murky waters of desktop publishing before plunging in headlong, I suggest you get hold of *The Publisher*, which was reviewed in the December 1993 issue.

***The Publisher* costs about £30, and at this value-for-money price its only competition is the equally adequate *PageSetter* from Gold Disk. Check out the adverts in this issue of CU Amiga for prices, as they tend to change rather quickly.**

BIG NUMBERS



Ever since I've had my Amiga I've been interested in graphics based around mathematics. You may not believe this, but there is actually a limit to the amount of pictures that you can display on the screen.

I have devised a formula to actually calculate the number of screens possible in a screen mode such as low resolution, 32 colours: colours to the power of the number of pixels.

It's not a very complex formula I must admit, but it works. For example, if you took a screen of 320x256 pixels stored in 4096 colours (HAM mode) the number of different screens you could produce would be... far too large to print here, but I can say that the number consists of exactly 295,925 digits.

When you consider that one page of CU Amiga contains approximately 6,400 characters, it would take 462 pages of CU to write this number down (about two full issues).

However, this number does cover every single picture seen in any art package or game, ranging from a screenshot of *Populous 2* to a *Vista Pro 3* image, to a purple dot in the corner of the screen in *Deluxe Paint*.

Thanks for your time.
Daniel White, Walsall.

Thank you Daniel for trusting us with your formula. I trust you have written a program which will randomly fill the screen with dots, because eventually you'll get a picture of your own face. Or the Mona Lisa. Or an image of the Earth as seen from the Moon. Or a full-colour image from the inside of my stomach (How delightful).

In fact, given a fast enough computer we could use your theory to generate the screen shots for the January 1995 issue, which would save us the trouble of taking them at the time.

FLICKER VISION



I have recently bought an 80Mb hard drive for my 2Mb A600 which I have installed myself. After the computer has been switched on the screen flickers quite badly for the first half hour or so, almost as though it was warming up. Is this the case, and is it harmful to my Amiga?

Also, the drive came in two partitions: a 75Mb partition and a bootable 5Mb partition for Workbench. Is there any way I can enlarge the Workbench partition?

Finally, a friend told me that there is a 2Mb upgrade available for the trapdoor. Is this true? I've never seen them advertised anywhere, so I thought I'd check with you. Would a PCMCIA card work with programs such as OctaMED and CineMorph? Is there any way that I could possibly accelerate the A600, as morphing takes ages.
Dave Park, Letchworth, Herts.

Your screen flickering problem could be power related. Perhaps the standard PSU hasn't enough juice and is struggling.

Failing that, either the hard drive or the Amiga is broken – it's certainly not normal behaviour. Early Amiga modulators have been known to flicker between colour and monochrome, but recent ones should probably be okay. The HDTools program has an option screen dedicated to making and altering partitions. You should have no problems resizing your drive (10Mb for Workbench is more useful) and if you make sure the tick is in the bootable requester you'll be all right.

Before you start, remember to back up all your data, as re-partitioning a drive will destroy its contents. I haven't heard of any memory expansion for the A600 other than the 1Mb card that fits into the trapdoor, which gives the A600 a total of 2Mb of Chip RAM. Memory added to the PCMCIA card slot is not Chip RAM, but it will still be used by the system. For example, the *OctaMed* program will automatically load into the PCMCIA memory, leaving more of your Chip RAM for samples.

Currently, the only way to accelerate an A600 is to throw it out of a window. Remember if you upgraded it to a A1200, you could take the hard drive with you.

KEYMAPS



Dear Cu Amiga, I can't set the Keymap of my Amiga to GB and I get a $ when I type a.
Lots of people, Everywhere.

Ok, I thought this was simple until I had to do it myself again recently on a Workbench 3 system. Assuming you have your entire Workbench available on a hard disk, you must set the following:

Prefs/locale/Country to United Kingdom

Prefs/locale/Preferred Language to English and select SAVE.

Then set the following:

Prefs/Input/Keyboard type to British and select SAVE.

Next time you open a Shell, the keymap should be set properly.

Now, if you are using a floppy only system you will need to make sure that your boot disk contains the file 'gb' in the DEVS:keymaps directory. If it's not there, you'll need to copy it across from the storage directory.

NETWORKING

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» internal drive from the A500 as an external drive on the A1200, either by linking the machines or taking the drive out and rewiring it?

If possible I'd like to keep my A500 in one part, so can I use the drive from any other machines? In fact, are there any parts from old Amigas that can be used with the A1200?
Ben Hollis, Norwich, Norfolk.

Using the PD program *Parnet* (see next month's DIY section for full details) you can connect the A500 and A1200 together, and the A1200 can access the A500's floppy drive. And vice versa. Unfortunately, it isn't possible to use an internal drive as an external Amiga drive as some extra electronics are required.

The same goes for any naked drive mechanism you might see, so stick to Amiga specific drives.

As for cannibalising the A500 for parts – again, I'm afraid not. The mouse is probably the only part of the system that could be used as the A1200 motherboard and chips are several years more advanced than the trusty old A500, and nothing would be any use.

WHEN I GROW UP...



I'm 14, and I wish to write games software for a living on the Amiga when I'm older, so I thought I'd start learning now.

I already know how to use *AMOS*, so I want to get DevPac and learn 680x0 assembly language – or I did until I saw a line in CU AMIGA that said the 'C' language was more powerful than machine code. Could you tell me what language the games companies use, and what books and software I might need?
Lenny, Worksop.

Which language is more powerful is open to debate. For pure speed, you can't beat raw assembly language because that's what every other language is eventually translated into.

On the other hand, C offers a lot of support for data structures and function calling – ideal for larger programs and making use of the operating system. Interestingly, a good C compiler will produce code almost as good as hand-written assembler.

Most games companies use assembler, but more are turning towards C because, as games become more and more complicated, it makes sense to write all the game logic in C and keep the assembler for the ultra-speed-critical graphics code.

My advice to you would be to learn C first because the principles involved are more important than knowing the Motorola instruction set inside out. Anyone who can program can learn how to code in assembler in a day – it takes a lot longer to learn how to program in the first place, and longer still to learn how to program the Amiga.

WELL HARD VIRUS



I'm considering buying an Amiga 1200, and have some questions:
1. How do I know if there is a virus on a hard disk and how do I get rid of it? Does it mean that everything has to be reloaded, including all of Workbench?
2. How do I know if programs on floppy disk will install onto a hard drive?
3. I have loads of Spectrum games on tape, and I notice that there is a Spectrum emulator in the public domain.

How do I connect the cassette recorder to the Amiga? What do you think the chances are of getting the games working?
4. By the way, who is Fred Fish? Am I the only one not in on this?
Robert Pickering, Denbigh, Clwyd.

I hope you decide to go ahead and get a A1200. Here are some answers:
1. A public domain program such as VirusChecker will look through the files on the disk, and if it finds a virus it will delete the suspect file. You don't have to install everything again.
2. The box the game comes in will usually have a sticker on it, but the best way is to check the reviews in CU Amiga as we'll always say if a game can be installed or not.
3. The Spectrum emulator can load games from cassette tape by means of any normal tape recorder connected to an Amiga sound digitiser (sampler).

As long as the game doesn't make use of any strange copy protection methods, nearly all Spectrum software works fine: I've been playing the classic game *Thrust* with the emulator on my A4000 quite a bit. Well, until I bought *Frontier*.
4. No, you are not alone in your ignorance about Fred Fish. At the recent 'meeting of minds', practically all of the Amiga developers present had no idea about the identity of Fred Fish. To me this says a lot about the developers – they treat the Amiga simply as a games console and have no interest in the Amiga community at large. There's no great mystery about Mr Fish – Fred is the guy who collects all the Amiga PD to release as his 'Fish Disk'. He has so much software now that he's releasing it only on CD-ROM, so buy the last CDTV in the shop now.

PICTURE SWOPPING



I often swop pictures on disk between my dad's PC and my Amiga by using *CrossDos* to load the PC-format disks on the Amiga Workbench. My dad also has an Apple Mac in work. Is there any way I can get the Amiga to load these sort of disks? There is a colour scanner connected to the Apple and it would be great to load the pictures into *Deluxe Paint*.
Colin Turner, London.

The trick is not to get the Amiga to think like a Mac, but to get the Mac to think like a PC. Confused? Don't worry – the Apple Mac uses a very strange way of storing data on floppy disks, but with the Mac program *Apple File Exchange* which all Macs come with, it can read and write to ordinary PC format disks.

As you know, the Amiga can read PC disks through *CrossDOS* (included with all WB3 machines) so the only remaining problem is the file format.

A common Mac file format is TIFF, which is totally incompatible with the Amiga's own IFF. However, there are some programs in the public domain which will convert files for you. Some Mac programs also support JPEG which is a great way of squeezing large 24-bit colour files onto a single floppy.

THE NEED FOR SPEED



I have a number of questions weighing heavily on my mind. Please can you help ease my worries and calm my fevered brow by answering the following technical queries:

1. Why do you need a memory expansion to increase the speed on an A1200?
2. Would it be better to fit a Power Computing PC1200-4 or a Microbotics MBX1200Z with the same amount of memory?
3. Do I really need an FPU if all I want to do is play games?
4. Does the running speed of the CD32 match that of an A1200 fitted with extra memory?
5. Is the access time from a CD-ROM faster than from hard drive?
6. Assuming the answer to question 4 is yes, if I bought a CD-ROM drive for my A1200 would I no longer need the memory expansions?
7. Is it possible to use normal joysticks with the CD32?
B.A. Doherty, Winsford, Cheshire.

Well, after that heart warming plea, here are some equally weighty answers which I hope will solve some of your worries:
1. The A1200 comes with 2Mb of chip memory as standard. Chip memory is shared between the CPU (the Motorola 68020) and the custom chips which produce graphics and sound. Because of this shared arrangement, the CPU takes slightly longer than normal to access the memory, and this slows the computer down slightly.

When extra memory is added via the trapdoor, the CPU has immediate access and can therefore run at full speed – this explains why it is called Fast memory.
2. Depends on which one you like best. Seriously though, we're doing a complete round up of all A1200 peripherals soon which should answer your question.
3. No, if you only play games the extra expense of an FPU is wasted.

It does make sense to buy a memory board which could theoretically support an FPU in case you change your mind, and get hooked on graphics or sound software.
4. No, as the CD32 has only (hah! only!) 2Mb of Chip RAM, it runs at the same speed as an unexpanded A1200.

However, the CD32 has an extra chip (Akikò) which can speed up some graphics operations ever so slightly.
5. No, a hard drive is much faster. A double speed CD-ROM (like the one fitted to the CD32) will shift data at about 300K a second: a lot slower than a good hard drive.

With good programming, CD access can appear a lot faster – certainly fast enough to spool graphics and sound data directly from disk.
6. The question is: if you bought a CD-ROM drive for the A1200, where would you stick your memory expansion.

This is a question which can only be resolved when Commodore release details on the CD-ROM drive.
7. Yes, although the supplied joypads are better because they support more buttons.

Phew, now, with all that lot finished, I'm mentally and physically exhausted. I'm going back to Commander Kennedy in *Elite II*, who is somewhere deep in the Groombridge system. Till next month playmates.

Q&A is yourindispensible guide to the Amiga where our team of experts attempt to answer all your Amiga-related questions.
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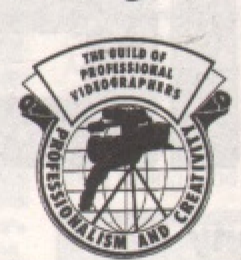
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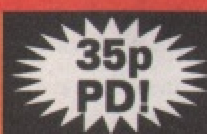
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OCTAMED 5





SOUND LAB

It's hip, it's hop, it's happening. Tony Horgan checks out the latest grooves you can create with your Amiga.

Although *OctaMED* is an amazingly powerful program, if you can't get over the first few hurdles you might never realise just what's possible with this little gem. In the first of an on-going series, this month we'll be concentrating on the basics – enough to get you up and running, without getting too deep in confusing details. Even if you don't understand everything, this simple step-by-step guide should have you waking up the neighbours in no time. The series will be geared towards the new features of *OctaMED* V5, but wherever possible there'll be notes on the equivalent features of previous *OctaMED* versions.

THE LOW DOWN

There are a few theories and facts which should be explained before we start, and which should help you make a bit more sense of what's to come.

1. Like other trackers, *OctaMED* outputs two samples to the left channel and two to the right when it's in normal four-channel mode. The two outside tracks (far left and far right on the screen) go to one side, while the middle two go out through the other. Usually mono samples are used. Stereo samples are actually two samples (a left and a right version of the sound), and so would take up two tracks each.

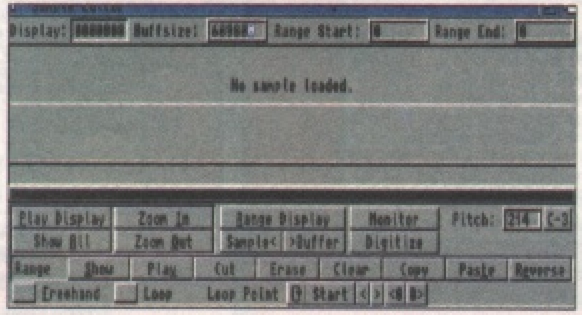
2. Songs are constructed by recording different blocks, then arranging the blocks to play in a specific order. The order in which you create the blocks has no bearing on the order in which they are played in the song. That's entirely up to you.

3. Although only four samples can be played at any one time in four-channel mode, you can use up to 63 samples in any one song (memory permitting). Any sample can be placed on any track you like. You could even play the same sample on all four tracks at once if you needed to.

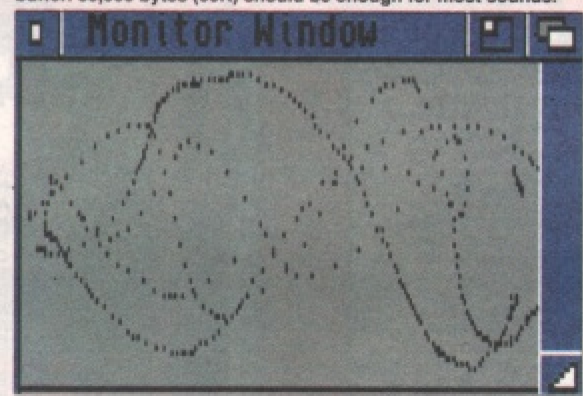
Okay, now to make some noise...

SAMPLING A SOUND

You could load a sample from disk, but that's for wimps. Here's how to sample your own sound. You should have an audio source connected to your sampler cartridge. Click in the sample name box. This is found in the middle at the top of the screen on V5, and is accessed via the INSTR button on previous versions. Choose a name for your sample and type it into the box. Ignore the 'Error: object not found' comment.



Before you can record any samples, you first need to set up a buffer. 60,000 bytes (60K) should be enough for most sounds.



Monitoring the volume of the incoming sound is an important factor in getting a good quality reproduction.

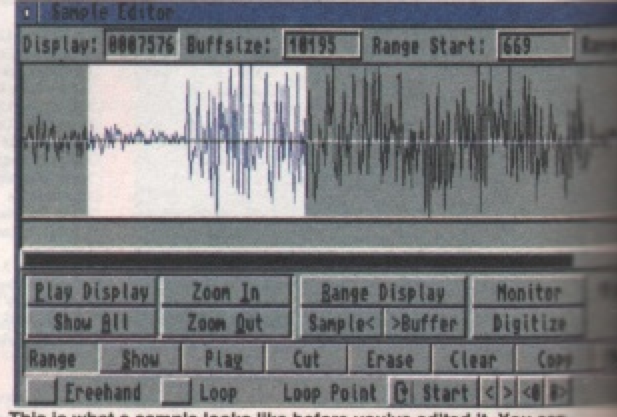
Click on EDIT SAMPLE (SMPED on earlier versions), then click in the box marked PITCH, and replace the number 428 with 214 (remembering to press RETURN to register the change). This sets the sample rate. Instead of kilohertz, *OctaMED* uses a measurement called period. The higher the number, the lower the sample rate. Use a lower number for higher-quality samples. A period of 214 is the same rate used to play back the note C. Click in the BUFFER SIZE box, and type in 60000. This will open up a blank space for you to sample into that's 60k long (60 thousand bytes).

Click on the MONITOR button. Play your record, CD or tape, or make a noise into the microphone if you have one connected. You should see the line in the monitor box start to jump up and down. If there's little or no reaction in the monitor window, check your cables and then adjust the volume level on your input. Tweak the volume until the sound wave just touches the top and bottom of the box, without flattening out.

Once you've got the volume level right, close the monitor window (or click the right mouse button with older versions of the program). This takes you out of monitor mode. Now cue up your sound source to a point just before the bit you want to sample. Click on DIGITIZE (or click RECORD twice with older versions), and start your sound source playing. It will then be recorded into the blank sample space.

TRIMMING YOUR SAMPLE

You'll now have some spare noise at the start and end of your sample. This needs to be cut off before

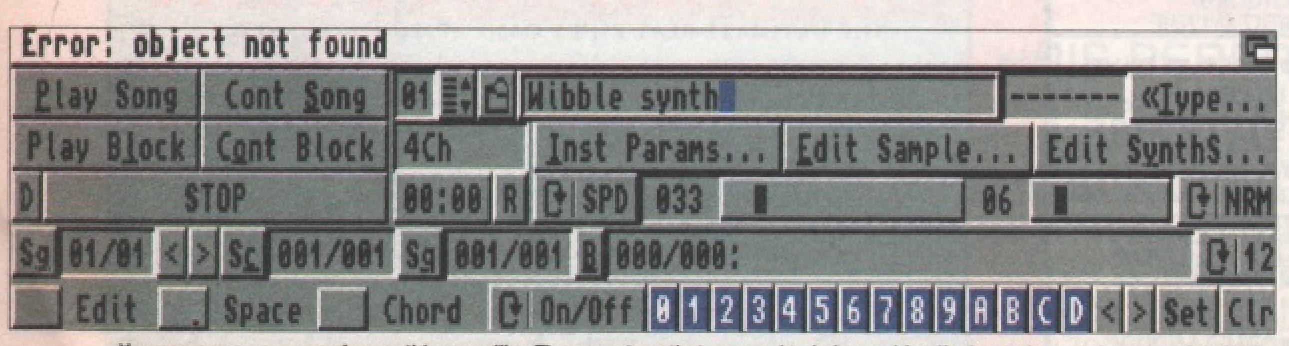


This is what a sample looks like before you've edited it. You can see where the main sound starts from the wave's higher peaks.

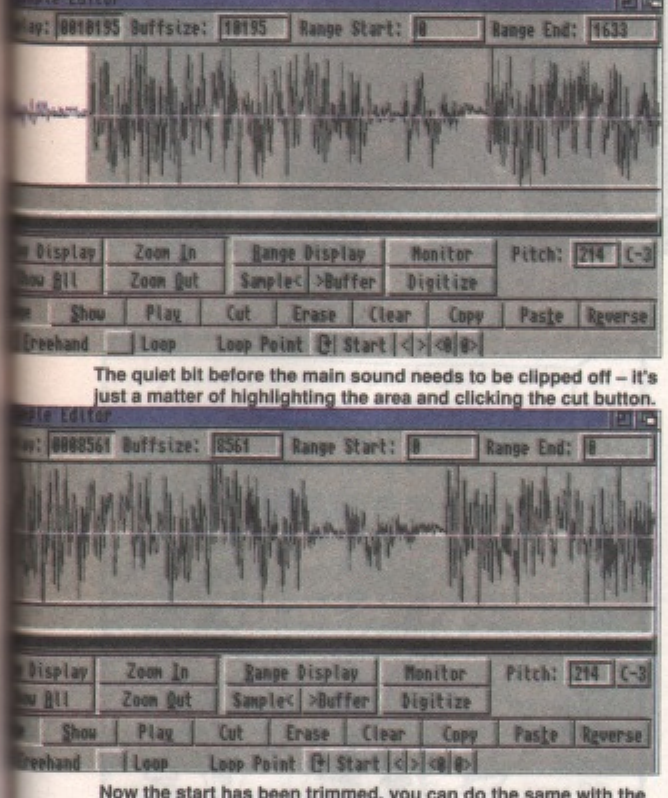
you can use your sample properly.

Press F2 or click the octave gadget that's currently marked 12, which stands for octaves 1 and 2. You should now have octaves 2 and 3 selected. Now when you press Q on the keyboard, your sample will be replayed at the correct speed. Watch the line travelling along the sample as it plays. Take note of where the line is on the sample when you hear the part you want. Highlight the immediate area surrounding the start of the bit you want to pick out by holding down the left mouse button (right button on previous versions), and moving the mouse over the required area.

Click on the SHOW RANGE button and the highlighted area will be expanded to fill the sample window. Repeat the highlighting and zooming process if you need to get a larger view of the sample. Click on PLAY DISPLAY whenever you need to



You can name your samples anything you like. These are tags that are used to help you identify them when you're using *OctaMED*, and can also double as filenames for the samples, although you could save this sound to disk with a completely different filename.



The quiet bit before the main sound needs to be clipped off – it's just a matter of highlighting the area and clicking the cut button.

Now the start has been trimmed, you can do the same with the unwanted section at the end.

hear the visible section of the sample again.

Once you've located the start of your required section, click on it with the left or right mouse button. Now click the SHOW ALL button, which will zoom the display right out again. Move the pointer to the left of the range you've just set, and hold down the SHIFT key. Hold down the left or right mouse button (depending on which version you're using), and drag the range to the far left.

Click on the CUT button, and the unwanted sound at the start of your sample will be trimmed off. When you press the Q key now, you should hear the difference. Repeat the process to trim unwanted sound from the end of the sample.

COMMONLY USED KEYS

SPACE: stops a song, block or sample playing.
ARROW KEYS: move the edit cursor around the block.
SHIFTED ARROW KEYS: up and down move through the blocks, while left and right move through the samples.
ESCAPE: toggles edit mode.
NUMERIC KEYPAD: toggle tracks on and off.
F-KEYS: change octaves.
HELP: enter on-line help mode (version 5 only).
APOSTROPHE (below ESCAPE): toggles double line spacing.
TAB: highlights the current line (has no effect on the sound).
DELETE: deletes the current entry beneath the cursor.
CTRL F: displays the amount of free memory (both Chip and Fast), and also the largest single block available.
Version 5 users can also use the menu shortcuts, triggered by a combination of the Amiga key and the corresponding letter beside the menu option.

LAYING DOWN A TRACK

Close the sample editor window (or if you're using a previous version click the button at the top right marked with four columns of little lines). Using the Amiga keyboard, practice playing a few riffs or rhythms with your new sample. When you've got something you're happy with, click on the E and D buttons. Next time you press a key, the block will start rolling, and anything you play will be recorded. Start when you're ready. Once the block reaches line 63, it loops back to the start. To stop recording, press the SPACEBAR or click the STOP button.



That magical "D" button is a handy thing, which allows you to automatically start recording as soon as you hit a key.

To record another track, move the cursor square with the **arrow keys**, so that it's across the three short horizontal lines on another track. To sample another sound, use **SHIFT** and the **RIGHT ARROW KEY** to move to sample slot number 2. Repeat the sampling and editing process (remembering to give your second sample a different name from the first). You can now sample as many sounds as you have room for in memory, and go on to lay down tracks three and four.

NEW BLOCKS

That's the first block sorted, but a song needs more than one block. To create another block, move to the BLOCK menu and select NEW->APPEND. Users of previous versions should click the BLOCK button, followed by the NEW BLOCK button. Use SHIFT and ARROW DOWN key to move to your new block. Repeat the block recording process.

Now you should have two different blocks. To make these into a song, you need to insert them into the playlist. Click on the SQ button or select PLAYING SEQUENCE from the SONG menu. Use the INS CURR (insert current) button to place the blocks in your preferred order, using the slider bar and pointer to position the insertion point. The current block is the one you can see – to change this, use the ARROW UP and DOWN keys. Users of previous versions must use the INS and arrow icons at the top left of the screen. Click on PLAY SONG to hear the whole thing.

Hurrah! Now you've got the basics, you can start messing around with the rest of the program. Next month we can get stuck into some of the more advanced features that can turn an average track into a classic. CU

WE WANT YOUR TUNES

Yes, the popular Tune of the Month slot is back! If you think your compositions deserve to reach an audience of over 120,000 people, then we want to know about it. Wherever possible, we'll be including a reader's Tune of the Month on one of the coverdisks. One important point to remember is to keep your tunes as small as possible, without compromising the original flavour too much. If you can squeeze your musical masterpiece into 150k or less, whack it on a disk (with the relevant player routines), and send it to: Tune of the Month, CU AMIGA, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU.

OCTAMED V5 PD

If you want to try out the new *OctaMED* version 5, there's a PD save-disabled version currently available for the price of a disk. This is complete in every way except for the save feature, on-line help and locale support, and is available from Seasoft Computing, The Business Centre, First Floor, 80 Woodlands Avenue, Rustington, West Sussex, BN16 3EY. Enclose a cheque or postal order for £2.

A song is made up of a series of blocks strung together in your chosen order, so after you've recorded your first block, the next thing to do is to create a new one from the Block menu.

BACKCHAT

We found that long-haired layabout Dillon beneath an enormous pile of Christmas cards and good wishes. Dragging him out and stapling him to his desk, we eventually managed to get him to answer a few letters from this month's letter's bag.

THE FAR SIDE By GARY LARSON



"Thank God, Sylvia! We're alive!"

FRONTIER FAULTED?

I am writing to a computer magazine for the first time with this letter, and it is to complain in the strongest possible terms about the rating and review that was given in your mag to *Frontier*. I have read CU AMIGA for some years and, on the whole, the games I have purchased on your recommendation have been as described. However, I have played *Frontier* now for about eight hours and I am disappointed in the extreme.

1. The autopilot which is supposed to land you on a planet without the need for human intervention does not. Once locked onto the target starport it crashes the ship regularly when approaching the planet to land. Indeed it has never successfully landed in 16 attempts!

2. Combat is a joke! Even after getting a lock on to an enemy ship the speed of hundreds of thousands of kilometres per hour is maintained and most ships are in and away before the autopilot has a chance to react.

In the original *Elite* it was simple to slow to zero speed, orient the ship and then accelerate and engage in dogfighting. Frequently in *Frontier* the enemy ships circle you continuously as you hurtle at thousands of kilometres per hour in a straight line with the autopilot struggling to keep them in your sights!

At that speed it takes half a solar system to slow down to allow what might be effective manual combat, but I have never had the hours to spare just slowing down to find out!

The above faults make the game impossible to play. How can any game pass the play testers, never mind be given such a high rating and such a glowing review? Do you have a reply?
Stuart Murdock, Ayrshire.

Your problems with *Frontier* are common, yet very easy to solve. The main problem a lot of people had is the 'ship crashing into planets' syndrome. One thing you need to remember is that the autopilot and the docking computer are separate entities – the autopilot simply gets you to a targeted space co-ordinate, and then the docking computer takes over. The autopilot takes no notice of what is actually in front of it, only concentrating on actually getting you there. So, if the spaceport is on the wrong side of the planet, it will try to fly through the planet to get to it! The only way to remedy this is to either make sure you pick a location that you can reach, or switch off the autopilot when you are near the planet and fly around it manually. In terms of combat, the autopilot is not an automatic guidance system. Yes, it works fine if you are fighting a large, slow ship, but against anything else, you're going to have to rely on your own reflexes.

THE FAR SIDE By GARY LARSON



Laboratory peer pressure.

WHY NOT?

So the CD32 arrives and I'd like to express my disbelief in most computer games manufacturers' attitudes. They complain bitterly about piracy and then along comes a new virtually pirate-proof format and they sit on their laurels and wait to see if it sells. If they cared about their future, they should convert all their good games to the CD format NOW.

The games don't need massive upgrading to make use of the CD32's custom chips. I heard a rumour that a good game is based on good gameplay!

What the CD32 needs is games to make it sell. Sure it will cost them in the short term, but in the long term we'll all be better off. Maybe then they won't blame their poor sales on pirates and will be forced to make sure the games are worthy of release.

And we, in turn, will be treated to a fab new

TEAM TALK

Christmas is coming, and the staff are getting fat. Please stick a penny (or a couple of million) in the EMAP Pension fund.

DAN SLINGSBY



As though practising for the January sales, Dan is spending every waking moment (and most of his sleeping ones) chained to his desk. The Swinging Slingsby has been editing not one, but two magazines at the same time these past couple of weeks, the end result being not enough sleep, there never being any coffee in the office in the morning and a rather disgruntled editor. That said, he's about to disappear for a couple of weeks doing something he calls 'resting'. A strange concept – maybe some of the rest of us will get to try it sometime!

JON SLOAN



Damp tissues and a deep welling behind the eyes all round, as CU AMIGA's own Lethal Weapon, 'Steel Hands' Sloan packs up his desk in a small knapsack and heads for pastures new. Yes, it's true, those wily foxes over at Konami have managed to lure Jon away with nothing more than a measly pay rise and a paltry company car. Oh and things like a desk with more than one draw, and sensible working hours. We can't understand why he's undergoing such a rash act, but we wish him all the best anyway. The jammy beggar.

generation of games and conversions of great stuff like *Day Of The Tentacle* will appear.
Paul Duncan, London.

It's a sad but true fact that, although it would be quite easy to just dump standard Amiga games on to CD, most companies are still waiting for large enough sales figures before taking the plunge.

The question is, would the people who have been good enough to shell out for this wunderkind of a machine really settle for what can only be described as shovelware? How many people now are particularly happy at the amount of games that don't take advantage of the AGA chipset? What do you think?

THE CD DEBATE RAGES ON...

In your November issue, Simon Marky raised the interesting point of coverdisk floppies vs CDs. You said that you would stick with the former for at least another year. I suggest, however, that you start mounting CDs on the front of the magazine as soon as possible. The reason is that I would love to buy any kind of CD-ROM drive if it were not for the software. Being a poor student (aren't we all?) I need all my savings for hardware and the only software I can afford is either PD or coverdisk material.

It really is a chicken-and-egg problem. If you or other mags do not have cover CDs, there is hardly an incentive for me to buy a CD-ROM drive. But if I and many others do not own such a drive there is no incentive for you to bring out CDs. The solution to this lies in the fact that most people do own audio CD players. So in the first months you could bring out CDs that 'only' contain, say, 100Mb of software and the rest sound.

For instance, I would not mind hearing interviews with Amiga celebrities like Jay Miner, Fred Fish or Francois Lionet. Or you could put in demos of albums by artists using the Amiga, like Snap or Coldcut. You could even get one of them to do an Audio Workshop on 'How to Make a Top Ten Hit Using Only MED and a Pile of James Brown Samples'!
Branko Collin, Nijmegan, The Netherlands.

Branko, we argue the toss amongst ourselves every day concerning a cover-mounted CD. We do intend to give away CDs at some point in the future, so watch this space.

HELP!

I hope you can help me, I have been reading your outstanding magazine now for four years, which is how long I've had my Amiga, and I have nearly every coverdisk from CU AMIGA. But last year my computer caught the Revenge! virus, which destroyed over half of my disk collection.

After having terminated the virus, I am still in the process of refilling my disk boxes. But one disk, namely CU AMIGA coverdisk 23, has been »

LETTER OF THE MONTH

VERY WORRIED

I am very worried that one of my favourite Amiga magazines cannot be trusted any more when it comes to games reviews. I am very worried that CU AMIGA, in the ever more competitive magazine rush for games exclusives and first reviews, is starting to believe the hype and not really play-testing the actual games at all. This might be the charitable interpretation. The more cynical view could be that CU AMIGA is being forced into giving good reviews/false information to secure the exclusive review/advertising/demo from the software house.

There has been a very worrying trend in the last six months for some of your major games reviews and previews to read almost as though they have been written by the software houses' respective marketing departments. Rather than independently analysing games for your readership, you seem to have entered into a Faustian pact with the software companies which requires you to make all sorts of over-inflated (and sometimes downright misleading) claims for their hot games. The damage is then compounded by software houses using your reviews in their advertising as evidence of how wonderful the game is. Subsequently, people who have bought these games in good faith 'cos of your reviews have lost a great deal of respect and you are becoming a bit of a laughing stock.

'Infamy,' you say, 'where's your evidence?' Well,

1) Your *Frontier* review in the November 1993 issue. *Frontier* is good, but it is not that good. Your mark of 97 per cent makes it almost a perfect game, but the program has a couple of gameplay faults (not to say some spectacular bugs) which become evident to the player within a couple of days. If you had reviewed the game properly, these would surely have marked the game down and deflated your 'most important step forward for games this decade' claim. For instance:

- The action is so jerky near spaceports that dogfighting combat is virtually impossible. [Dogfighting near spaceports is also illegal. Nothing will attack you near a port unless you have fired first. Naughty, naughty...]
- When you enter a new system, pirates seem to be generated randomly, so when your ship is poorly armed, it's best just to save the game at every space station.
- Most ships seem to be piloted by mad kamikaze pilots whose only combat tactic seems to be ramming you.
- The hyperspace logic of the game is flawed. When you go on assassination missions, the huge cruisers hyperspace at speeds that are not obtainable from the ship stats, forcing you to buy a tiny ship to keep up with them.
- Crewing is a right pain. You have to hope there are enough job wanted ads at the space station and then you find the crewing figures for ships are completely different from those printed in the manual.
- In some ground-based stations with retractable roofs, you can't get out without blowing up – the game seems to think the roof is still retracted when you try to take off.

I could go on, but surely with these faults this can't be a '97 per cent, ultimate in space adventure' game?

2) Your scandalous (for there can be no other word) treatment of Ocean's *Epic* and subsequent refusal to back down over the ridiculously high mark you gave it. The game is awful – it's a pretty demo that's finished in about two hours. One of your competitors gave it 34 per cent. Can we really believe you reviewed the game impartially or seriously?

3) The *DID* preview feature in the June 1993 issue. I was very excited about your three page feature on *Inferno/TFX* and the lovely screenshots you showed captioned by comments like, 'Welcome to the first truly amazing A1200 game'. I happened to be at the CTS show in Olympia soon after and immediately made for the Ocean/DID stand to ask them how they'd found working with the new Amiga, only to be met with blank faces from DID themselves and the comment that 'we haven't even started the Amiga version yet, it will be out next year sometime'. Your so-called Amiga feature was all PC screenshots – your desperation for exclusives seems woefully evident.

Now any one of the above, I'd call a slip, two a problem, but three is a downright travesty. There's no harm in getting enthusiastic about a game, but there's great damage caused by over-hyping, misrepresenting and under-reviewing new releases just to get the edge on the competition.

Amiga punters, like myself, rely on magazines like yours to give us an independent and trustworthy view on games and help us steer through the minefield of generic dross that is all so easily pumped out by the software houses these days. We rely on you for quality control – if you've thrown in your hat with the houses then you are nothing more than a corporate brochure and all is lost.

Irresponsible chasing of games exclusives can only bring you short term gains and will alienate the vast majority of readers who will (rightly) conclude that if they can't trust what's here, then a lot more might be untrue. Please look hard at your editorial policy on game reviewing before it's too late and reinstate a sense of perspective in the pages. If you're not careful, you will lose the support of the Amiga community. A good start would be to print this letter.
Ian Watson, Norwich.

I feel a little disturbed about your reaction to the Frontier review. I assure you there is nothing backhanded about the way CU AMIGA reviews games – and, remember, a review is merely a stated opinion. I was extremely enthusiastic about Frontier*, and still am after playing it until three or four some mornings. True, there are a couple of bugs, but nothing that really affects the gameplay. However, that is my opinion, and you are completely within your right to disagree. That isn't to say that either of us are wrong, of course. But judging by the public reaction to the game, I would say that I am in the majority. As for the TFX preview – yes, they were PC screenshots. However, they are identical to the Amiga in every way (256 colours, texture mapping etc), which is the only reason we used them. CU AMIGA is not out to con, nor are we willing to compromise ourselves in order to gain exclusives.*

TONY DILLON



Some would say that he's never really been alive, but that didn't stop El Hairy Knuckles from having a near-death experience while on a trip to Dublin this month. On his return flight the engine noise dropped to nothing and the plane fell sickeningly for a thousand feet or so. It levelled out a moment later, with the Captain announcing over the tannoy that 'We have started our descent a little early'. 'I wasn't scared,' he claimed. 'Nothing scares me.' However, since the incident he won't get in the lift, and even walks slowly down the stairs now.

TONY HORGAN



Tony's getting his Technics! That's the cry from Horgy's corner of the office. He's been complaining since we first employed him that he just didn't have the equipment to go out DJing and meeting girls. This month, though, Tony's finally got his hands on everything he needs to bring his 'rad' sounds 'to the house'. On the upside, this means we don't have to listen to endless looped breakbeats played through *Octamed*. Unfortunately, it means that Tone has taken to wearing caps and oversized jackets in unusual ways and destroying the office record collection 'in the name of art'.

LISA COLLINS



'Trying to get you lot of slackers and workshys to actually settle down and do some work for a welcome change,' was Lisa's reply when we asked her what she had actually been doing this month. What that roughly translates to is that she has found the Mystical Ruler Of Turley – thought destroyed after the departure of Heather 'Crack The Whip' Turley. So it's deja vu all round as members of staff get a good spanking for handing in late copy. As I sit here writing this, I'm two weeks past deadline. Goody.

» damaged beyond repair, and on this disk were two absolutely poptabulous tunes called mod.3 and mod.fantasy. I absolutely loved these tunes, but all my Amiga-owning friends have not got this disk either. I have in my collection version 3 of *MED*, from a coverdisk of a rival magazine, which I use extensively.

I would be glad if you could get in touch with me because it is too old a disk to get as a back issue, but if you still have these truly exquisite tunes hidden somewhere deep in your archives, I would be more than happy to send you a blank disk onto which you could write them. I'll even pay the return postage! I would be eternally in your debt and would kiss your shiny boots if you could get in touch.
Owen Williams, Worcester.

Coverdisk 23 was a long time ago, and unfortunately we don't have any copies of it left. The question is, how did you come to wipe out half your collection with a single virus? Were you being a little careless?

Remember: always switch off the machine for at least 30 seconds before loading a game, and if you have to swop a lot of disks in a single sitting, ensure that they are clean by checking them with a virus killer first.

BIGGER AND BETTER

I am writing to ask how much bigger my computer magazines are going to get. I own an Amiga A1200, alongside a Super Nintendo and a SEGA Mega Drive, and I have noticed the increasing tendency to stick large pieces of card behind the issue to make people think they are getting even better value for money.

How much further is it going to go before you have to start charging a higher price for the magazine? I would happily forgoe the backing card and booklets to keep the mag at the same price. Not so long ago, a console magazine came mounted on a piece of card twice the size of the issue, a booklet and a free can of lemonade. Naturally the coverprice went up, and although it seemed like a good value package at the time, once you had thrown the card away and drank the lemonade, all you were left with was the magazine itself.

CU AMIGA is the best on the shelf because of it's high quality editorial – NOT what you can find plastered all over the magazine.

Yes, the coverdisks do influence the sales, and I have bought your rival magazines on the strength of their disks, but the fact that your editorial is better than theirs is the reason I keep coming back. Don't get gimmicky, CU. You don't need it.
Heather Redmond, Torquay

Don't worry, Heather, we aren't about to get all gimmicky on you. Last month we offered what we thought were some very strong promotions, and at no extra cost to you. Keep your eyes peeled, because some even better ones are on the way.

DEEPLY SHOCKED

I recently had the misfortune to glance at a copy of CU AMIGA, as my son is an avid reader. And, to be frank, I am very worried about the blatant use of sexism that prevails throughout the magazine. First of all, the cover image is a startled fifties-style babe staring in amazement/horror at the coverlines of the magazine. What has this woman got to do with the contents of the magazine I asked myself? Well, absolutely nothing. This women is a sad marketing ploy which holds to the school of thought that if you stick a women on the front cover of any magazine, all the horny boys and men will flock in their droves to buy this magazine, regardless of the contents.

This attitude seems to be the main driving force behind computing magazines and indeed computer games. *Cover Girl Strip Poker* is one fine example of pornography parading as a computer game. However, back to your magazine. After passing over the babe on the front cover, I was confronted with 'Vampyra', another babe, only this time dressed in a plunging neckline and spouting sexual innuendos in reply to gamers' queries about games. Does she know anything about games in real life? Does she heck! Again, she is another sad marketing ploy trying to entice men to read the pages using a bit of cleavage and dirty talk.

A worrying repercussion of all these blatant uses of sexual imagery is reflected in your readers' entries to your art gallery. Rogne Ness from Norway sent in his paper to Amiga conversion in the form of Ramela – a gravity-defying bosomed women clothed only in two minuscule strips of cloth over her nipples and strip of cloth wrapped around either thigh.

However, it is not just the readers who use this form of sexual imagery when they are exploring the capabilities of the Amiga. It is also the contributors. Smattered throughout the tutorials on the Amiga are images of semi-naked, big-busted women. These illustrations are used to demonstrate how your Amiga can help you to paint, draw, build your own robot, make videos, and so on. No matter the topic, a picture of a woman will appear somewhere on the pages. Why don't you just be done with it and and publish the magazine on wipe-clean paper too?

A frightening note is that new games are coming into development which will allow you to have sex with characters in the game (Chris Crawford article). I want my son to grow up seeing women as human beings, not as big breasted, scantily-clad women who, if you push a few buttons, will strip off and have sex with you.
A worried mother, Chelsea.

..OR NOT!

I'm just writing to say how much I enjoy your new adventure column. Vampyra really brightens up my month. How about a massive poster? How about a 16-page pullout? What about running a compo so the winner could get a date with her. With my hardware and her software we'd make a great team! I could show her a couple of adventures, all right. Or else, failing that, the girl on the cover would be a good date as well. I wouldn't kick her out of bed for eating crisps.
James Mitchelson, Newcastle Upon Tyne.

FINE TUNING

Whilst experimenting with the sampler project I built by following the instructions in May's CU, I've found that if I alter the capacitor C2's value from 470nF to 47pF, I obtain better results. Why is this?
N Thompson, Bath.

As clearly stated in the article at the time, the value for C2 was found by experimentation. With my circuit the 470nF capacitor works fine. Due to different tolerances in chip design and the way your circuit is built, you may find - as suggested in the article - that smaller values work better. You may want to try 47nF as well before finishing with the soldering iron. By the way, the 4mF capacitor quoted for C1 is in real life a 4mF7 capacitor, as anyone with any knowledge of electronics will tell you.

SATISFIED CUSTOMER

In reference to your 'satisfed customer' item in the December CU AMIGA – I posted a cheque to Electronic Arts in Langly, Berks for a *DPaint 4* upgrade at 5.15pm one evening. The package arrived by return of post at 8.00 am – 38 and three quarters of an hour later. How's that for speed?
F.W. Brewer, Gloucestershire.

That's what we like to hear. Want to get something off you chest? Write to us at CU AMIGA, 30-32 Farringdon Lane, London EC1R 3AU.

MAT BROOMFIELD



Congratulations to Mat on breaking the world record for the most words written in a week. Despite us calling him every five minutes to see how he's getting on or just to tax his brain with some fiendishly-difficult technical problems like 'Where's the coffee spoon?', Mat has managed to write an entire magazine almost completely on his own! This has been very encouraging for the rest of the team who intend to superglue him to his desk, so he can single-handedly produce our February issue while the rest of us have a Christmas break.

JOHN KENNEDY



John has:
* Not been flying his kite because it is too cold. * Trying not to fall of his motorbike on the icy bits. * Walking around with his fingers crossed to hear if he will graduate. * Coughing and sneezing a lot. * Picking dead mice off his garden path. * Playing *Elite II* too much and neglecting his girlfriend. * Lusting after a 68040 accelerator (sad). * Playing hard to get with Lisa C. on the telephone. * Teaching his brother how to pass his driving test (he failed). * Trying to find time to write the best Amiga driving game ever.

CLUB CALL

This month's Club of the Month is a little different from most we feature in that it's more technical than most. Phillip Kruman set up Blitter due to the lack of 'proper' support for the Amiga (i.e. not just the games side of things and leaning towards more serious ends). So, all you people who use your machine for accounts, graphics, video production or programming – let us introduce you to Blitter.

Based in Sunderland, Phillip has come to the rescue of those who wanted a more serious club, and the amount of time he's invested in it really shows. For a start, all members have complete access to his personal library of over 10,000 PD programs. Whatever you want, the chances are he has it. If you aren't sure what you want, he can probably find it with his Find a Title service. All you need to do is outline the kind of program you need and what you want to use it for, and if he has a program that can do the job, he'll send it to you.

Members also receive a copy of Blitter magazine, a disk-based editorial that contains hints, tips, members letters and opinions, plus a whole host of other gizmos, access to a postal help line plus loads more. If you want more information, then write to Phillip at 213 Fordfield Road, Sunderland, Tyne and Wear SR4 0HF. Please enclose a SAE and a blank, formatted disk if you want a demo copy of Blitter.

THE GREAT DEBATE

Bored? Listless? Played all the new games that you got for Christmas already? Well, listen up as John Kennedy examines the case of the Amiga versus the consoles.

So you got an Amiga for Christmas, and now you're wondering why. Why do floppy disks take so long to load? Why do you have to swap them so often? The manuals look terribly complicated, and what exactly is the point of the Workbench system? Perhaps you should have got a console like the man in the shop said – at least a console doesn't have a keyboard to make you feel guilty every time you look at it. Hang on, wait a minute. An Amiga isn't a games machine. It's a computer that happens to play games. Here's a list of reasons why your Amiga is more useful than any console currently available:

GRAPHICS

The Amiga, especially the new A1200 machine, has excellent graphics. It can display pictures on the TV that you would swear are real pictures. It might seem obvious, but it's taken over 10 years for home computers to do that.

With these realistic graphics available, all sorts of things become possible. With paint and animation packages such a *Deluxe Paint*, not only can youcreate works of art, but also miniature feature films and cartoons. If you expand your computer with a 24-bit colour card, you can display highly detailed pictures in over 16 million colours, animate the results and store them on videotape. The Channel 4 TV program Babylon 5 uses the Amiga to create the space-based special effects.

A small peripheral will allow the mixing of Amiga graphics with live TV, so adding subtitles and introduction screens to home videos is remarkably easy.

SOUND

Inside the Amiga is a chip whose sole purpose is to replay sound samples – real sounds, stored in computer memory. With a free program called *MED* (yes, I did say free) you can arrange sound samples to make four-channel stereo music.

With a little extra hardware, you can connect the Amiga to a home music keyboard and record, edit and play back your own compositions. You can even buy an expansion card which will record several tracks of sound ready for mixing and recording onto CD.

With a £30 add-on, you can sample your own sounds and add them to your collection, so your own voice or musical instrument can be included in your work.



WORKBENCH

The Workbench is one of the most powerful computer operating systems available today – on any computer. It's truly multitasking, which means, provided you have the memory, you can run many programs simultaneously. Programs can communicate which each other by means of the *ARexx* inter-process communication language, so an art program can link directly into an image processing program or a video image grabbing system.

Workbench provides easy ways of copying and duplicating disks, examining files, looking at pictures and launching programs, and it can be fully customised.

GAMES

The Amiga has dedicated chips to support games software. The large amount of standard memory and excellent sound and graphics means that games written especially to take advantage of the hardware are probably the best currently available. What's more, Amiga games are considerably cheaper than console games, and usually offer a great deal more scope.

PUBLIC DOMAIN

Amiga users are a fanatical bunch (in case you hadn't noticed) and that leads to the creation of an entire culture based around the machine. Anyone can be a member of the club – all they need to do is buy an Amiga computer.

Altruism is also prevalent in the Amiga world, which means that there is a huge collection of public domain software available. If a program is public domain, the author requires no payment for it, just a little fame. Some of the best Amiga software can be obtained freely over electronic mail networks or for a small copying charge from the hundreds of PD libraries.

I could go on all day about the Amiga. I'd mention the easy expansion, the ability to add hard drives and CD-ROMs, the way modems can connect you to the entire world, how a video digitiser can put real pictures of yourself inside your TV screen.

I you want to stop the invasion of mindless computer games, it's up to you. You've got to be more creative and get off your backsides and use your computer. It may take more effort than slapping in the latest £50 cartridge, but the so-called 'serious' aspects of computing can make you more satisfied than any blaster.

So what are you going to do? Why, keep reading CU Amiga, of course. We'll show you how to really use your new computer. CU

The Vidi Amiga Range



Rombo, are proud to announce the launch of their new range of Multimedia Digitisers.

Each digitiser has been designed with total flexibility in mind, by offering a cost effective upgrade path between models. Giving the user complete peace of mind, and the freedom to choose a digitiser for his present requirements. But reassuring him, that if those change, he can move up to the next model. All Vidi Amiga's now have a similar user interface, so moving between products is easy !



Vidi Amiga (12) RT, offers all the functionallity and specification of Vidi (24) RT, but in 12-bit. Capturing 4096 colour images in real-time from any video source. This includes TV, Video Recorder, Video Camera, Satellite etc. etc.

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Vidi Amiga (24) RT offers a breakthrough for all Amiga users, taking them into the world of 24-bit image capture. With no restrictions on video equipment or Amiga hardware.

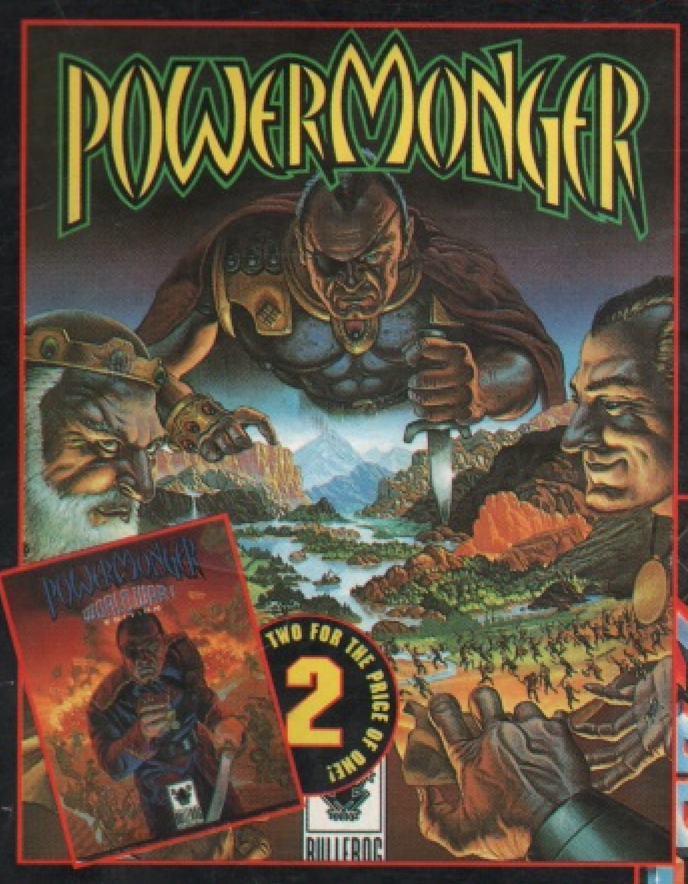
All the pictures shown on the full page Vidi Amiga (24) RT advert represent the actual printed output quality that can be achieved. Simply by sending the finished image file to a Bureau for output.

Throw away your scanner, its too much like hard work !



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UPHOLD THE LAW

"This is definitely one of the best film licenses ever." GAMES X

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Robocop 3 brings you a fast 3D polygon theatre of action featuring... ALLEYWAY SHOOT-OUTS, CAR CHASE, ARM TO ARM COMBAT with ROBOT NINJAS and much, much more.

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